



Assistive Technology Suppliers Australasia

ATSA was established in 2000 to represent the interests of AT suppliers who manufacture, import, distribute, service, and hire equipment. ATSA's 94 members include small, family-owned businesses, international companies and not-for-profit organisations that provide AT related services.

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Copies and more information

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Executive summary

Available evidence demonstrates that AT prices in Australia are both fair and reasonable, and relatively low in comparison to prices elsewhere. Prices set by Australian AT retailers are a reflection of the costs of the products they sell, and the essential services they provide that are often included as part of the retail price.

Internet prices for AT, particularly from internet-only AT retailers operating out of the USA (and sometimes from the UK), are substantially lower than typical Australian retail prices because no services are provided and the purchaser carries all risks regarding fit, appropriateness, warranties, etc.

The wide range of services provided by AT manufacturers, importers, distributors and retailers are essential to ensuring a good fit between the individual and their AT, particularly at the moderately to highly complex end of the AT pyramid. Any substantial efforts to further reduce AT retail prices are likely to reduce the provision of these essential services to AT consumers and their therapists/prescribers, which in turn will result in worse outcomes for consumers and higher costs and lower productivity over time.

Background

Concerns are sometimes raised that the prices charged by specialist assistive technology (AT) retailers in Australia are high relative to prices in other countries. These concerns also give rise to questions about whether the commercial retail market-place for AT in Australia (and the associated AT supply chain) is truly effective in delivering the best possible prices for private and public purchasers. Government funding and procurement programs for AT also appear to be making many major public policy decisions based on perceptions of excessively high prices for AT.

AT is particularly important because it is a primary enabler, assisting one in 10 Australians of all ages to undertake activities that others take for granted. Ensuring a good match between the individual and their AT is vital. The retail prices of AT products include the costs of an extensive range of services provided by AT suppliers (manufacturers, importers, distributors and retailers) to help ensure a good match.

The best AT selection decisions are made in the context of an active partnership between the AT user, their therapist/prescriber and the AT supplier. This is particularly true when the AT and/or the context of its use is moderately to highly complex.

A viable and competitive AT supplier sector is pivotal to ensuring choice and effective AT solutions for AT users at the best possible prices. But price must not be the only determinant of AT purchasing as this creates perverse incentives to drive down prices at the expense of achieving good outcomes for consumers, and the attendant savings to government and the community these good outcomes provide.

Notwithstanding the general impression that AT suppliers are all about 'aids and equipment, hardware and gadgets', it is largely a service-based industry – particularly in relation to moderately and highly complex AT (see Figure 1). These services are extensive and described in detail in this background paper (see also the *ATSA Briefing Paper on AT in Australia*), and include product development, testing and manufacturing at the back-end through to advice and education, in-home trials, fitting the product to the consumer, customisation and repairs/maintenance at the front-end. Typically the level of supplier services required to get a good match increases as the complexity of the AT and/or the complexity of the AT user's goals and environment increases. All of these services are ultimately aimed at ensuring the best possible match between the AT and the individual, and many of them are incorporated into the retail pricing of specialty AT retailers.

AT Price Comparisons

Valid price comparisons are based on comparing like-with-like. In its 2014 investigation into AT pricing in Australia, the Queensland Competition Authority (QCA 2014, p 35) identified the following elements that must be considered to ensure like-for-like comparisons:

- ‘differences in product specifications
- differences in supplier services
- [foreign currency] exchange rates
- customs duty and taxes
- delivery charges, including handling and insurance
- warranties
- transaction costs
- discounts and special offers
- other factors such as convenience and timeliness.’

Consequently, price comparison research is inherently complex and difficult – and the details matter. More details on the price comparisons presented below are provided in the body of this background paper.

Three sets of recent price comparison results are summarised below, with the first two drawn directly from the QCA’s recent work, and the last one is based on research by ATSA.

The QCA sourced comparative pricing data regarding ‘lowest available prices’ from the websites of AT retailers. The lowest prices from USA and UK internet AT retailers are from ‘internet-only’ retailers, meaning that there are no shop-front overheads and no services provided to purchasers, with the purchaser taking all risks and responsibility to ensure that the AT is the best AT solution for them, including assembly, adjustment and learning how to use it. In contrast, Australian websites selling AT are all underpinned by brick-and-mortar AT retailers, with the associated assistance and protections for consumers and costs to AT retailers that this entails.

The QCA compared prices for 24 products, and also prices for these same products plus delivery costs to Australia. Delivery costs are particularly important because most AT is manufactured overseas, and AT is of no value if consumers do not actually have it. Excluding delivery costs, overseas prices were 38% lower. When delivery costs were included, Australian prices were 24% lower compared to overseas prices.

In relation to the QCA price comparisons, it is important to note that:

- The overseas prices are from internet-only AT sellers, not full-service AT retailers as is the case for the Australian internet prices utilised.
- As noted by the QCA (2014, p iv): ‘Australia is a high cost country — Purchasing Power Parity analysis [for a broad basket of consumer goods] shows that general price levels, expressed in Australian currency terms, are 20 per cent higher here than in relevant comparator countries. The difference in relation to the United States is around 30 per cent.’ The differences in AT prices (excluding delivery costs) simply reflect these purchasing parity realities for most retail products sold in Australia, especially as most of the lowest prices used in the QCA research were from the USA.
- Although QCA did factor in exchange rates, the figures used were the official exchange rates without currency exchange commissions. Consumers purchasing goods from overseas typically pay a currency exchange commission ranging from 5–10%. When this amount was incorporated into the comparison calculations, on average undelivered AT was 28–33% cheaper overseas; and delivered AT was 29–34% cheaper in Australia.

The price comparison work by QCA for 'delivered' AT demonstrates clearly that Australian AT prices are not high, and are somewhere between 'low' and 'average' when compared to prices overseas. The evidence is even more convincing when taking into account: the additional expense of air-freight costs for some AT; currency exchange commissions; the low overheads, lack of services and resulting low prices of overseas internet-only AT sellers relative to full-service AT retailers in Australia; and purchasing parity analysis.

As part of its submission to the QCA's AT pricing investigation, ATSA undertook an international comparison of recommended retail prices for a sample of AT (see ATSA 2013). ATSA found that AT prices in Australia are lower than comparable OECD countries by approximately 14%, based on the average of the differences across the 12 products compared where there were data from 3 or more countries (for the 6 products where only 1 overseas price was available for comparison Australian prices were 27% cheaper).

Prices on different products and/or in different countries might have resulted in different findings. Additionally, while recommended retail prices are a good indicator, these are not 'enforceable' and actual retail prices may be higher or lower. However the congruency of ATSA's findings with the QCA's findings supports the validity and reliability of both price comparison methods used.

Also, consultation with Australian AT suppliers (including manufacturers, importers, distributors and retailers) indicates that these results reflect their own knowledge and experiences. Most suppliers have extensive anecdotal evidence about their own markets and pricing internationally. They also frequently comment that the Australian AT supply sector is generally very efficient, as well as not being very profitable for most suppliers – largely as a consequence of the high levels of competition and the levels of services required to support good consumer outcomes.

The lack of profitability in the sector is a significant indicator of the robust level of competition between AT suppliers – an *IbisWorld* (2012) analysis of the wheeled mobility segment of the Australian AT market found that average profitability was only 0.9% over the previous 5 years.

Why the perception of excessively high AT prices in Australia?

Given that the available evidence does not support claims that AT prices are excessive in Australia, it is important to consider why these perceptions persist. There are likely to be numerous factors involved including over-simplistic price comparisons between AT prices on overseas internet-only AT retailers and full-service AT retail shops in Australia; sensationalist media reports; the ongoing invisibility of many of the services incorporated into Australian AT retail prices; and the high costs of AT that is moderately to highly complex.

The issue of internet versus full-service AT retailers has already been considered above. In relation to sensationalist media reports, of those which ATSA has been able to investigate, none have withstood scrutiny (see Case Studies A and B).

The invisibility of many of the services incorporated into the retail price of AT persists. ATSA continues to highlight this range of services in its work such as the *ATSA Briefing Paper on Assistive Technology in Australia*. In addition, there has been some examination of the potential value/risk of separating out these services and charging for them separately. The general consensus by AT suppliers is that this would likely increase the overall costs of AT because: (a) high levels of competition in relation to AT retail prices constantly force AT retailers to find ways to provide these services as effectively and efficiently as possible; (b) 'de-coupling' these services would increase paperwork, the number of transactions required, and could reduce the strong link between AT products – supplier services – consumer outcomes.

Prices at the lower end of AT complexity have consistently dropped in recent decades, largely due to improved manufacturing technologies and low labour costs in countries such as China.

However, prices for more complex AT products have continued to rise. A powered wheelchair with complex controls and customised seating can retail for between \$15,000 and \$40,000, depending on the details of the products and services provided. Many of these products are manufactured in North America and Europe, where labour and other costs have continued to rise, and this combined with the ongoing costs of innovation; product development; and safety testing/standards have kept product costs high.



Introduction

Concerns are sometimes raised that the prices charged by specialist assistive technology (AT) retailers in Australia are high relative to prices in other countries. These concerns also give rise to questions about whether the commercial retail market-place for AT in Australia (and the associated AT supply chain), is truly effective in delivering the best possible prices for private and public purchasers.

It also appears that public policy decisions regarding federal, state and territory government programs that assist individuals to access AT through government purchasing and/or subsidies are increasingly based on the belief that AT prices in Australia are excessive. This perception that the market is failing to deliver the best possible AT prices is leading to public policy decisions focused on developing and implementing major government interventions in the AT market-place and supply chain. Therefore, it is vital to examine the available evidence regarding AT prices in Australia to test the validity of these increasingly influential perceptions of market failure.

With AT it is often more complex and difficult to provide 'the right product to the consumer' than with other goods, and often requires significant levels of services by AT suppliers to ensure a good match with the individual AT user. If an AT retailer does not maintain its ability to effectively match AT to the requirements of individual consumers, and to do this at a fair and competitive price, it will soon find itself out of business.

AT is particularly important because it is a primary enabler, assisting people with disability and seniors to undertake activities that others take for granted. AT is vital to maximising inclusion, independence and participation in all aspects of life for one in every 10 Australians (ABS 2004).

Consequently, the pricing of AT is a critical issue in relation to affordability and accessibility. This is also why government funded programs that fully or partially fund AT purchases for individuals are such a critical part of the Australian aged care and disability services landscape. In turn, these government purchasing/subsidy programs (with their associated eligibility, funding, and purchasing structures and processes) have a significant impact on the structures, competitiveness, diversity and effectiveness of Australia's AT market, prices and supply chain.

The World Health Organization (2004) defines AT as –

an umbrella term for any device or system that allows individuals to perform tasks they would otherwise be unable to do or increases the ease and safety with which tasks can be performed.

ATSA is the peak industry body for AT manufacturers, importers, distributors and retailers. Members range from small family-owned businesses to international companies, and most focus primarily on motor vehicle modifications, daily living and mobility products and services. ATSA has over 93 members and while this is estimated to be about 30% of the specialist AT suppliers nationally, the majority of the daily living and mobility products in Australia pass through their hands. A viable and competitive AT supplier sector is pivotal to ensuring choice and effective AT solutions for AT users at the best possible prices.

Any research, evaluation or investigation is framed by a particular perspective derived from strongly held values and views. The strongly held values and views that underpin ATSA's work, including this paper are:

- The best value and maximum benefit of AT for consumers is achieved when the AT provided is carefully matched to the individual's needs, preferences, goals and environment.
- Extensive user involvement in selecting and trialling their AT solution, underpinned by consumer choice and control over purchasing decisions, is central to ensuring best value and maximum usefulness of the AT for that individual.

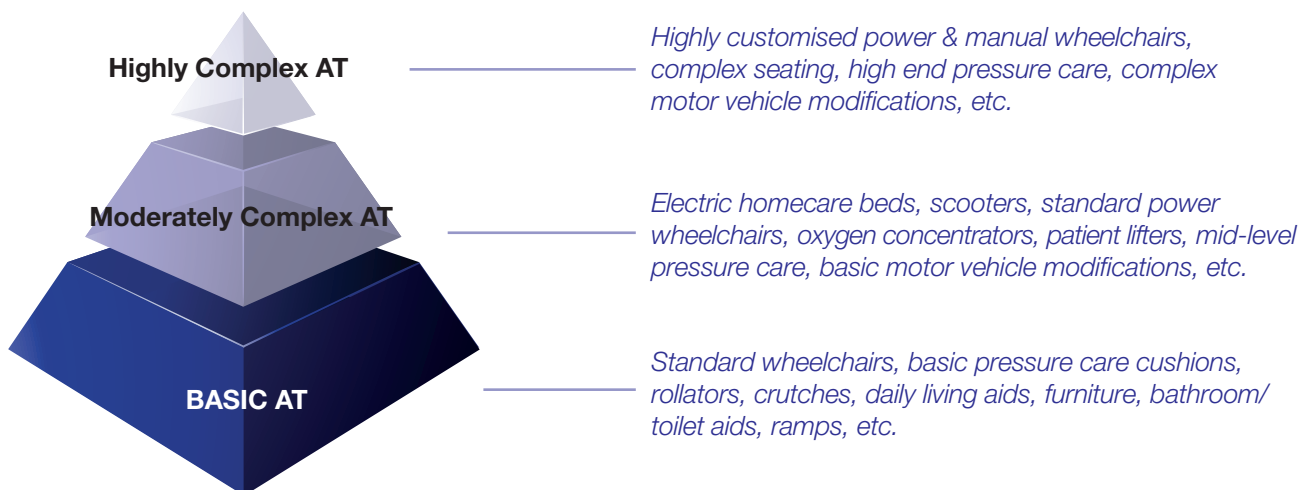
- The best AT selection decisions are made in the context of an active partnership between the AT user, their therapist/prescriber and the AT supplier, in which each party contributes their considerable knowledge and expertise. This is particularly true when the AT and/or the context of its use is moderately to highly complex, and professional and technical expertise is required to ensure its success.
- Although price is an important consideration, the true value of AT can only be measured in the context of its effectiveness in assisting those who use it to live their lives to the fullest.
- A diverse and highly competitive AT market-place is the best way to ensure that suppliers provide the most effective AT solutions to individuals at the lowest possible prices.
- Providing AT products and services effectively and efficiently in rural and remote Australian communities presents particular challenges that may often require different public funding structures and processes from those in metropolitan areas.
- Public policy decisions should be underpinned by the best available evidence.

As indicated above, using 'price' as the primary focus is potentially very problematic if the effectiveness of matching the AT to the individual and their environment is not considered. If price is the sole or primary determinant of AT purchasing, this will lead to perverse incentives to drive down prices at the expense of achieving good outcomes for consumers, and miss out on the attendant savings to government and the community more broadly that these good outcomes provide.

While the image most of us have in relation to AT suppliers is as providers of 'aids and equipment, hardware and gadgets', it is in fact largely a service-based industry – particularly in relation to moderately and highly complex AT (see Figure 1). These services are extensive and described in detail below, and range from product development, testing and manufacturing at the back-end through to advice and education, in-home trials, customisation, fitting and repairs/maintenance at the front-end. All of these services are ultimately aimed at ensuring the best possible match between the AT and the individual, and most of them are incorporated into the retail pricing of AT specialty retailers. Typically the level of supplier services required to get a good match increases as the complexity of the AT and/or the complexity of the AT user's goals and environment increases.

Figure 1, the AT Pyramid, provides a broad outline of AT by levels of complexity. As levels of complexity increase, costs for AT suppliers and prices for consumers also tend to increase. In part this is driven by the sophistication and manufacturing costs of the device, and also by the levels of service required to ensure a good match between the device and the user. Importantly, although they are not illustrated in Figure 1, issues of complexity are not confined to the device, but also vary widely in relation to the person with disability and their environment. Issues such as cognitive impairment resulting from illness or injury, severe physical limitations/deformities and intellectual disability, as well as the consumer's environment, lifestyle and aspirations can all increase the complexity of arriving at a good AT solution, the solution itself, and ongoing support. Complexity is also often compounded because some consumers' needs are not particularly stable, as in the case of children who are growing in all respects (physical, mental and social) and people with progressive illnesses such as motor neurone disease and multiple sclerosis. Both the skills required and the time required increase as client complexity increases – even for 'simple' AT solutions.

Figure 1: The AT Pyramid



As complexity of both the device and the consumer increase, so does the risk of not getting the ‘right’ solution in place which generates poor outcomes for the consumer, and poor value for money expended by the funder. Equipment abandonment is a common indicator of failure, but injury, illness and even death can also be consequences of providing the wrong or inadequate AT solution. The possibility of such results further emphasises the importance of having a highly skilled workforce as part of the Australian full-service AT retailers’ model. While this model generates costs and impacts on pricing, the benefits gained significantly outweigh the costs.



Perceptions of high prices

Perceptions of excessively high prices for AT in Australia appear to be the result of a combination of factors, including:

- media reports
- supplier pricing practices – the invisibility of suppliers’ services
- international internet prices
- price differences
- overpriced AT
- geo-blocking and exclusive supply arrangements
- ‘lower prices’ achieved in some government procurement programs
- moderately and highly complex AT is expensive

Media reports

In relation to media reports and other allegations of excessive AT prices in recent years, ATSA has examined these on a case-by-case basis as they have been raised whenever possible. In every instance that we have been able to investigate there has been no evidence of excessive pricing. Two examples have been de-identified and are presented in Figures 1 and 2; note that all dollar amounts are in AUD based on exchange rates at the time.

Figure 2: Case study A

Complaint (December 2010)

A parent of a young child with significant disability stated: ‘In March 2008, my child’s wheelchair cost \$13,000 in Australia, yet I could have bought it online from the USA for just \$3,750.’

Investigation results (*prices quoted are AUD*)

- The total cost invoiced was \$11,846 of which the wheelchair was just one component of the AT solution and was priced at \$5,888. This was 5% below the importer’s recommended retail price at the time.
- The quoted US internet price of \$3,750 was for the base wheelchair with no options and no freight, whereas the local AT retailer’s price included a number of options and air-freight to Australia.
- The importer of the wheelchair advised the cost of air-freight for the wheelchair was close to \$1,000, due to its large size, and the additional domestic freight (also paid by the AT supplier) would have been around \$45.
- The balance of the cost was for complex seating components (\$3,004), postural supports (\$2,663), and labour for custom wheelchair modifications, fitting and delivery (\$291).
- The detailed assessment and associated AT trials were performed at no cost.
- Labour was charged at \$85/hr plus GST for custom wheelchair modifications (1 hour billed) and \$60/hr plus GST for setup and delivery (3 hours billed).
- Despite a lengthy explanation to the parent, the claim of ‘excessive pricing’ continues to be made.

Note that this complaint was widely circulated locally and nationally to federal and state ministers, MPs and the media for a number of years, and still surfaces regularly.

Figure 3: Case study B

Complaint (December 2010)

An Australian consumer contacted the US-based manufacturer of highly bespoke, custom manual wheelchairs and stated: *'Prices through your Australian dealer network are double the US cost for titanium wheelchairs and triple the US cost for aluminium wheelchairs'*.

Investigation results (prices quoted are AUD)

- When purchased in Australia, the titanium wheelchair's recommended retail price was \$6,135 through a full-service AT retailer and \$6,290 through a similar retailer in the US (including \$450 for airfreight to Australia). The US website price was \$4,530 (including \$450 for airfreight to Australia).
- When purchased in Australia, the aluminium wheelchair's recommended retail price was \$2,550 through a full-service AT retailer, and \$2,545 through a similar retailer in the US (including \$450 for airfreight to Australia). The US website price was \$2,000 (including \$450 for airfreight to Australia).

AT pricing and the invisibility of suppliers' services

Historically AT suppliers, particularly AT retailers, have incorporated the costs for many of the services they provide into the retail price. This practice, along with the taken-for-granted nature of many of these services, has resulted in the invisibility of many of these services and their attendant costs. Imagine asking your local car retailer to: (a) make some minor modifications/adjustments to the vehicle you might be interested in purchasing; (b) deliver it to your home; (c) leave it with you for a week to see if it suits your needs; (d) come out and pick it up unwashed and with a bit of wear and tear. Then you go down the street and ask the next car retailer to do the same. Then you and retailer you have selected wait 6–18 months for the government funding program to approve the decision to purchase your 'chosen' vehicle and its related options and modifications, but in the meantime your needs have changed and a new set of vehicle models is available, so you have to trial them all over again (steps a – d as outlined above, and possibly at several different retailers). For the retailer, the costs for these services are recouped only if and when a sale is made.

While in-home trials are not required for all AT sold, the process outlined above is a common scenario for many moderately to highly complex AT products. Other often hidden or taken-for-granted services that are usually incorporated into AT retail prices include: sourcing new and innovative products; maintaining well-stocked showrooms and demonstration/trial items (often in a multitude of sizes and configurations); free long-term loans of AT items to other services such as Independent Living Centres and spinal injury units; hiring, training and retaining highly skilled and specialised professional and technical staff; and maintaining a wide range of spare parts and a workshop for assembling products. The workshop time and costs undertaking modifications/customisation are usually charged for separately, but are often not considered separately by purchasers as they are an inherent part of getting the right AT solution. Also the costs of maintenance and repairs are not typically included in retail prices for AT.

Internet prices

Internet prices are usually lower than prices in your local retail shop for most goods (see Productivity Commission 2011). The pricing of AT products is no exception, and one example can be seen above in Case Study B. Particularly for internet-only AT retailers – that is, retailers with an internet presence, but no brick-and-mortar shops or retail outlets – prices can be kept to a minimum because their services and overheads costs are kept to a minimum. More information and details regarding internet pricing are in the ‘Price comparisons’ and ‘Can the US internet sales model work in Australia?’ sections below.

Price differences

Price differences are also commonplace for most items offered for sale in the retail environment, again including AT products. Different prices for the same or similar items from different retailers are usually a result of: different business models affecting both business costs and pricing; different locations with both different costs and different levels of demand (for instance, a shop in a major city versus a shop in a regional centre); larger businesses that can spread costs across more transactions and gain discounts when purchasing products due to volume levels; highly specialised businesses (for instance, they may focus only or primarily on customised manual and/or power wheelchairs and solving very complex mobility and seating problems) versus more generic shops; and so forth. In its investigation into AT pricing, the Queensland Competition Authority found that there was evidence of price differences, but that there was no evidence that these were the product of anti-competitive practices (QCA 2014).

Overpriced AT

Perceptions of excessively priced AT are also fuelled by some AT retailers opportunistically raising their retail prices on some sales. Reports of this occurring do surface from time to time. Notably in preparing this report we were unable to gain access to any public or private reports or investigations into ‘opportunistic pricing’ occurring on a one-off or systematic basis (and if you have access to any such reports please forward any available details to the authors as soon as possible). Informal reports of ‘opportunistic pricing’ do suggest that such practices can and do occur from time to time, and that organisations and governments involved in purchasing AT should have checks and structures in place to monitor the prices they are paying in relation to average or ‘normal’ prices to ensure that this is not occurring on a systemic basis. In relation to ‘normal’ or ‘average’ prices, it is essential to be mindful of the importance of taking into account the variability in the services provided that are covered by the retail price. For example, an AT retailer may provide a pressure care cushion straight off the shelf to a consumer – especially if it is simply a replacement for an existing and effective cushion – for a particular price. That same retailer may well quote and charge a different price for that same cushion when it is fitted for the first time and therefore may require a trip to the consumer’s home with a variety of cushions and some very hands-on testing of what works best for that individual and their needs. That said, opportunistic practices do not appear to be widespread as informal reports surface only occasionally and publicly available reports or investigations into such practices do not appear to be available. A crucial part of a strategy for minimising such practices is maintaining a strong competitive retail and purchasing environment, as well as effective frameworks for meaningful and transparent price monitoring and investigation by government AT purchasing programs.

Geo-blocking and exclusive supply arrangements

Geo-blocking and exclusive supply arrangements are also commonplace throughout the retail sector in Australia, including AT, and sometimes raise concerns about anti-competitive behaviour leading to excessive pricing. Geo-blocking occurs when overseas manufacturers try to limit the online sales of their products in particular countries. Similarly, exclusive supply arrangements occur when a distributor has exclusive rights to a product. In Australia, with most AT being imported and the relatively small size of the Australian market, these arrangements help to ensure a wide variety of AT products come to the market. Australians have access to an extraordinarily wide range of AT products and manufacturers, particularly in light of its small market. Competitive pricing is maintained as a consequence of extensive competition between similar products of different brands (not unlike the motor vehicle industry). The QCA (2014, pp viii–ix) found no substantiated evidence of anti-competitive behaviour, and also found that:

Where customer service and customisation is a significant component of the purchase, exclusive dealing arrangements may enhance economic efficiency. This can be illustrated by looking at an example where a dealer has not been granted exclusivity by a manufacturer, importer or wholesaler. Such a dealer may be reluctant to carry inventory, provide a showroom and a trained workforce, or offer equipment trials because other dealers may ‘free ride’ on those services and undercut prices.

Free riding occurs when customers are able to take advantage of a dealer’s showroom and staff expertise to shop for a product and then purchase from an online or no-frills dealer. Moreover, the costs of carrying inventory and training staff in the use of products may lead a manufacturer or distributor to deal with a single retail provider in any given geographic area. This is more likely to be the case in smaller markets. For example, the Magic Mobility submission explains that there is a single distributor of its products for Queensland because it would not make economic sense for two distributors to carry the necessary inventory for display and trials given the low volume of sales for its products in the state.

‘Lower prices’ achieved in some government procurement programs

In recent years a number of government AT procurement/subsidy programs have implemented bulk procurement contracts for various AT products, typically at the lower and moderate level of product complexity. Discussions with public servants running several of these programs make it clear that one of the primary drivers for these programs are their perceptions that AT prices are excessive in Australia.

ATSA’s long-held position is that bulk procurement can increase purchasing efficiencies and lower prices, but care must be taken to ensure that it is sustainable, does not reduce competition and does not compromise consumer outcomes (see the ATSA briefing paper on *Bulk Procurement* for more details).

Although ATSA believes that savings are possible without reducing consumer outcomes or competition, it appears that many existing AT bulk procurement programs are not functioning as well as they could, and claimed ‘savings’ are being significantly overstated. While a number of these programs at a state level routinely make claims of saving 20–50% on the price of selected AT products, there have been no systematic evaluations or data made available about the full costs of these programs to determine whether or not any actual savings have occurred. While claims of ‘saving’ 20–50% on the *price of the AT purchased* may be true, this is unlikely to translate into real savings of 20–50% on the supply of AT to people with disability when all costs, required services and client outcomes are considered.

Any claims of savings must factor in the costs of the procurement processes themselves, along with costs for associated activities and services such as warehousing, staffing, management, vehicles/distribution, assembly/adjustment/trials, training consumers/families and therapists in the use of the products, as well as providing/sourcing spares, maintenance and repair services.

All of these resources and activities are presumably being provided/sourced and funded somehow by these government procurement programs as they are essential to ensuring AT users receive AT products that meet their individual needs and situations. Reducing availability and access to essential services is a simple way to reduce prices, but in this context it raises significant questions about cost-shifting (to consumers, suppliers, therapists and other government-funded programs), and the impact these 'savings' have on providing effective AT solutions for consumers and the resulting outcomes for consumer, and on the long-term costs of not providing effective AT solutions to individuals.

Meantime, these unsupported claims of very high savings are fuelling perceptions that AT pricing in Australia is excessive. There is no doubt that good bulk procurement processes should be able to generate some savings as they reduce the number of business transactions required, but realistically these savings are likely to be in the range of 5–15% when all actual costs are considered and outcomes for consumers are not reduced.

The structure of some government bulk procurement programs also raises questions regarding the level of government involvement in providing and delivering AT products and associated services. Programs that involve high levels of government-funded infrastructure such as warehouses, large numbers of staff, delivery fleets and so forth appear to be contrary to the general policy direction of most Australian governments to reduce their direct delivery of goods and services – 'steering, not rowing'. One indication of this ongoing government trend is NSW Parliament's *National Disability Insurance Scheme (NSW Enabling) Bill 2013* in which all NSW government-run disability services and assets will be transferred to the non-government and public sector by 2018.

Additionally, within the context of Australian federal and state/territory governments' commitments to models of service delivery that are based on consumer choice and control, bulk procurement programs inevitably raise questions about restricting consumer choice and control and the consequent impact of this on both consumer outcomes and market efficiency. The recent announcement of a new Disability Act for NSW centred around consumer choice and control (Ajaka 2014) is indicative of the significance of this major shift in public policy for both people with disability and older people.

Importantly, both QCA (2014) and Jenny Pearson & Associates (2013) cite evidence that government-funded AT procurement programs that shift purchasing decisions and control to consumers have demonstrated ability to improve outcomes and reduce AT prices, but this evidence appears to have had little impact on the growing use by governments of AT bulk procurement programs that significantly curtail consumer choice and control.

Moderately and highly complex AT is expensive

The final contributor to the perception that AT prices are excessive in Australia are the prices of many moderately and highly complex AT products. Prices at the lower end of the AT Pyramid have consistently dropped in recent decades, largely due to improved manufacturing technologies and low labour costs in countries such as China.

However, prices for more complex AT products have continued to rise. A powered wheelchair with complex controls and customised seating can retail for between \$15,000 and \$40,000, depending on the details of the products and services provided. Many of these products are manufactured in North America and Europe, where labour and other costs have continued to rise, and this combined with the ongoing costs of innovation, product development, and safety testing/standards have kept product costs high.

In addition to manufacturing and shipping/importing costs the extensive services provided by AT suppliers at all levels (manufacturers, importers, distributors and retailers – see Figure 4) and the associated costs of these services, along with the high costs of doing business in Australia and the relatively small Australian market, and the result is that retail prices can be significant. However, the question remains, when all relevant factors are taken into account: is AT pricing Australia fair and reasonable?

Price comparisons

There are numerous different ways to do price comparisons, with the key requirement being that care must be taken to ensure the comparison is accurately comparing like-for-like. In its 2014 investigation into AT pricing in Australia, the Queensland Competition Authority (QCA 2014, p 35) identified the following elements that must be considered to ensure like-for-like comparisons:

- ‘differences in product specifications
- differences in supplier services
- exchange rates
- customs duty and taxes
- delivery charges, including handling and insurance
- warranties
- transaction costs
- discounts and special offers
- other factors such as convenience and timeliness.’

Not all of these elements can be readily or easily accounted for when considering comparisons, so it is vital to bear them in mind when looking at any comparison data and related findings.

Three different data sets/approaches to price comparisons are presented below, which represent the only valid and reliable published evidence that ATSA is aware of in Australia. The first two are drawn directly from the QCA’s recent work, and the last one is based on recent research by ATSA conducted as part of its original submission to the QCA inquiry.

QCA internet price comparison excluding delivery costs

Given time and resource limitations, the QCA focused entirely on pricing information available from the websites of AT retailers. While a useful approach, it does have some significant limitations. The QCA analysis focused primarily on the lowest available prices on overseas websites (mostly USA and UK) compared to Australian websites. The lowest prices from USA and UK internet AT retailers are from ‘internet-only’ retailers, meaning that there are no shop-front overheads and no services provided to purchasers, with the purchaser taking all risks and responsibility to ensure that the AT is the best AT solution for them, including assembly, adjustment and learning how to use it. In contrast, Australian websites selling AT are all underpinned by brick-and-mortar AT retailers, with the associated assistance and protections for consumers and costs that this entails.

Of the 35 products surveyed by the QCA (2014, p 43) on 20 January 2014, 24 had sufficient information for international price comparisons. ‘Of the 24 products 19 were less expensive overseas. On average the difference between the lowest Australian price and the lowest overseas price was 38 per cent (as a percentage of the lowest price).’ These prices do not include delivery charges, custom charges or GST.

These price differences do not support claims of ‘excessively high’ prices in Australia given that:

- The overseas comparison prices are from internet-only AT sellers, not full-service AT retailers as is the case for the Australian internet prices utilised (that is, these are not like-for-like comparisons).
- Purchasing parity comparisons between the USA and Australia consistently demonstrate an overall difference in the retail prices of goods similar to this finding. Purchasing parity research is done comparing prices for the same ‘basket’ of goods at any given time in different countries,

taking into account the exchange rate at that time. As noted by the QCA (2014, p iv): ‘Australia is a high cost country — Purchasing Power Parity analysis [for a broad basket of consumer goods] shows that general price levels, expressed in Australian currency terms, are 20 per cent higher here than in relevant comparator countries. The difference in relation to the United States is around 30 per cent.’ The differences in AT prices simply reflect these purchasing parity realities for most retail products sold in Australia, especially as most of the lowest prices used in their analysis were from the USA.

- Prices that do not include delivery to the consumer are useful in an indicative way, especially in the context of purchasing parity analysis and direct market comparisons between countries, but are of limited value in reflecting real costs for Australian consumers and AT suppliers.

QCA internet price comparisons including delivery costs

Given that AT is of no value to an individual who does not have it, the QCA also did price comparisons with delivery costs included – using the same initial prices that were used in the ‘non-delivered’ comparisons. The QCA (2014, p 48) found that: ‘Australian prices were lowest for 13 (54 per cent) of the 24 items sampled. On average Australian prices were 24 per cent lower than overseas prices (as a percentage of the lowest price).’ When continence products were excluded from the data the QCA (2014, p 51) found that: ‘Australian prices were, on average, 6 per cent more expensive than overseas prices.’ High delivery costs are not surprising given that most AT is manufactured overseas.

The ‘delivery costs’ included in the QCA findings are based on parcel post costs for delivery of all items. While this is suitable for some AT products, it is important to note that many AT items such as customised manual wheelchairs are air-freighted to minimise delays for consumers, and these costs are higher than for parcel post.

Finally, although QCA did factor in exchange rates (in both sets of their price comparisons), the figures used were the official exchange rates and did not include currency exchange commissions. Consumers purchasing goods from overseas typically pay a currency exchange commission ranging from 5–10%. When this amount was incorporated into the comparison calculations, on average undelivered AT was 28–33% more expensive in Australia; delivered AT for all 24 products was 29–34% cheaper in Australia; and when continence products are excluded from delivered products, AT was between 4% cheaper and 1% more expensive in Australia.

This price comparison work by QCA for ‘delivered’ AT demonstrates convincingly that Australian AT prices are not high, and are in fact somewhere between ‘low’ and ‘average’ when compared to prices overseas. The evidence is even more convincing when taking into account: air-freight costs for some AT; currency exchange commissions; the low overheads, lack of services and resulting low prices of overseas internet-only AT sellers relative to full-service AT retailers in Australia; and purchasing parity analysis.

ATSA recommended retail price comparisons

As part of its submission to the QCA’s AT pricing investigation, ATSA undertook an international comparison of recommended retail prices for a sample of AT (see ATSA 2013). ATSA found that AT prices in Australia are lower than comparable OECD countries by approximately 14%, based on the average of the differences across the 12 products compared where there were data from 3 or more countries (for the 6 products where only 1 overseas price was available for comparison Australian prices were 27% cheaper).

Prices on different products and/or in different countries might have resulted in different findings. Additionally, while recommended retail prices are a good indicator, these are not 'enforceable' and actual retail prices may be higher or lower. However the congruency of ATSA's findings with the QCA's findings supports the validity and reliability the two different price comparison methods used for AT delivered to (or for sale) in Australia. Also, consultation with Australian AT suppliers (including manufacturers, importers, distributors and retailers) indicates these results reflect their own knowledge and experiences. Most suppliers have extensive anecdotal evidence about their own markets and pricing internationally, and some of them have worked in other countries. They also frequently comment that the Australian AT supply sector is generally very efficient, as well as not being very profitable for most suppliers – largely as a consequence of the high levels of competition and the levels of services required to support good consumer outcomes.

The lack of profitability in the sector is a significant indicator of the robust level of competition between AT suppliers. This was confirmed with an *IbisWorld* (2012) analysis of the wheeled mobility segment of the Australian AT market which found that average profitability was only 0.9% over the previous 5 years.

Due to limited time and resources ATSA utilised a tightly focused approach to examining price differences. The focus was on mobility (manual and power wheelchairs and scooters) and related seating and postural support products, one manufacturer also included one of their major prosthetic items – a carbon fibre foot. Table 1 reports on the complete data set.

Data for this price comparison was sought from the major importers and global manufacturers of AT available in Australia: Invacare Australia; Otto Bock Australia; Permobil Australia; Pride Mobility Australia; R82 Australia; ROHO USA; Shoprider Australia; Sunrise Medical Australia and TiLite USA. All companies were asked to provide the recommended retail prices for a sample of their most popular products across the 6 countries we selected, as well as Australia. Not all companies approached were able to provide data within the timeframe required, limiting our comparisons to 18 products. One product, the Leckey EDS, is a paediatric product.

Prices for USA online sales were sourced from www.sportaid.com, one of the most popular and successful online AT sellers. There are some gaps in the product range available from www.sportaid.com, particularly in power wheelchairs and some low volume more specialised items. This lack of availability probably reflects: the level of demand for these items; differences in available products internationally; the inability of the internet model to safely provide more complex items; and/or the difficulty in making profitable sales of these items at significantly reduced prices relative to full-service AT retailers.

The foreign exchange rates used are from 27 September 2013 and were provided by Ozforex, and are the commercial rates available to businesses for currency purchases of more than AUD \$20,000. The exchange rate used for the USA internet prices was the rate quoted by the National Bank's website on 27 September 2013, and accurately reflects what a consumer would pay when purchasing by credit card over the internet on that day. Both of these exchange rates utilised incorporated currency exchange commissions.

As can be seen in Table 1, across AT products and across countries there are many price variations which tend to reflect the complexities of local markets and supply chain differences. However, overall Australia was between 37% and 13% cheaper than the mean of other OECD comparison countries on 9 of 12 products, and more expensive by 9% to 1% on 3 products. Overall, Australia was 14% cheaper. For all of these means, data were available from at least 3 countries.

Table 1: International recommended retail price comparisons of AT products

Product	Australia	US	Canada	New Zealand	UK	Germany	Japan	US Website	OECD Mean RRP (excl. Australia & US Website)	Australian RRP Relative to Mean OECD RRP*
Jay2 Cushion	\$695	\$455	\$724	\$529	\$697	\$890	\$537	\$332	\$639	\$56
Quickie 2 WheelChair	\$2,222	\$2,196	\$2,820	\$1,824	\$3,184	-	\$2,713	\$1,372	\$2,547	(\$325)
QM710 MWD Power WheelChair	\$8,897	\$11,693	\$12,285	\$9,620	\$12,518	\$15,591	\$11,841	-	\$12,258	(\$3,361)
ROHO QuadSelect High Profile Cushion	\$685	\$491	\$748	\$796	\$964	\$550	\$521	\$389	\$678	\$7
ROHO Hybrid Elite Cushion	\$695	\$507	\$827	\$796	\$964	\$550	\$521	\$400	\$694	\$1
ShopRider QT-3 Scooter	\$1,750	\$1,923	-	-	-	-	-	-	-	(\$173)
ShopRider RainRider	\$9,100	\$9,636	-	-	-	-	-	-	-	(\$536)
ShopRider Rocky6	\$5,800	\$6,422	-	-	-	-	-	-	-	(\$622)
ShopRider Venice	\$3,500	\$5,351	-	-	-	-	-	-	-	(\$1,851)
Permobil M300Corpus3G Power Wheelchair	\$16,582	\$23,531	\$24,672	-	\$19,317	\$26,890	\$14,367	-	\$21,755	(\$5,173)
TiLite TR Series 3 Custom Manual Wheelchair	\$3,895	\$3,657	\$4,501	\$5,677	\$3,950	\$6,040	-	\$2,665	\$4,761	(\$866)
Lecley EDS Seat Base, Backrest & Chassis	\$1,589	\$2,702	\$2,467	-	-	\$1,472	-	-	\$2,214	(\$625)
Ottobock Ventus	\$2,260	-	\$3,096	-	-	\$3,610	\$1,682	-	\$2,796	(\$536)
Ottobock B400 Power Chair	\$3,959	-	-	-	-	\$7,225	-	-	-	(\$3,266)
Ottobock Start M1 Wheelchair 40.5 Std	\$695	-	-	-	-	\$1,584	-	-	-	(\$889)
Ottobock Start M4 Wheelchair XXL	\$1,456	-	\$2,810	-	-	\$2,279	\$1,899	-	\$2,329	(\$873)
Ottobock Cloud Cushion	\$736	\$586	\$655	-	-	\$972	\$554	\$415	\$692	\$44
Ottobock Trias Carbonfibre Foot	\$795	\$1,237	-	\$907	\$750	\$1,191	-	-	\$1,016	(\$221)

* Note: when there was data available from only one other country this was used to calculate the difference rather than the mean, in all other instances the mean of at least 3 other countries was utilised. All prices are in Australian currency based on exchange rates on 27 Sept 2013

On 6 items comparison data were limited to only one country, in part due to the care taken to ensure we were comparing like items with like items. Additionally, limited availability of identical products across multiple countries is common within the AT sector as well as the broader retail sector. Market forces common to all retail sectors (for instance local market preferences), a combination of government AT funding scheme rules and other regulations are also a major influence on AT product availability.

Of the 6 items with only one comparison price, all were cheaper in Australia by 9–56%, with a mean across the 6 items of 27% cheaper in Australia.

The variability between recommended retail prices for AT from full-service suppliers internationally, including Australia, are likely to be caused by a number of factors including:

- international freight costs
- type of product
- market size
- local taxes and charges
- differences in the usual costs of doing business (wages, rent, freight, insurance, etc.)
- differences in standards compliance and testing
- requirements of large local AT funding schemes, as local markets are often structured around purchasing structures of governments and/or social insurance schemes as they are major purchasers of AT in most OECD countries.

Significantly, across the board internet prices were lower by comparison with all other prices, ranging from 41% to 49% cheaper than the mean recommended retail price (including Australia), with an average difference of 44% cheaper (see Table 2). Internet prices compared to those of Australian full-service AT retailers yielded a similar result: online prices ranged from 52% to 32% cheaper, with a mean difference of 42% cheaper overall (see Table 3).

Table 2: Mean OECD recommended retail prices compared to US website prices

Product	Mean OECD RRP (including AUS)	US Website Price	Mean OECD RRP compared to US Website Price'	Percentage of Difference
Jay 2 Cushion	\$647	\$332	\$315	49%
Quickie 2 Wheelchair	\$2493	\$1372	\$1121	45%
ROHO QuadSelect High Profile Cushion	\$679	\$389	\$290	43%
ROHO Hybrid Elite Cushion	\$694	\$400	\$294	42%
TiLite TR Series 3 Custom Manual Wheelchair	\$4617	\$2665	\$1952	42%
Ottobock Cloud Cushion	\$700	\$415	\$285	41%

Table 3: Australian recommended retail prices compared to US website prices

Product	Australian RRP	US Website	Australian RRP Compared to US Website Price	Percentage of Difference
Jay 2 Cushion	\$695	\$332	\$363	52%
Quickie 2 Wheelchair	\$2222	\$1372	\$850	38%
ROHO QuadSelect High Profile Cushion	\$685	\$389	\$296	43%
ROHO Hybrid Elite Cushion	\$695	\$400	\$295	42%
TiLite TR Series 3 Custom Manual Wheelchair	\$3895	\$2665	\$1230	32%
Ottobock Cloud Cushion	\$736	\$415	\$321	44%

The very substantial differences between internet prices and full-service AT retailer prices are primarily because:

- no service is offered through internet sales
- the internet seller typically never handles the AT product as it is usually shipped directly from the manufacturer to the purchaser
- internet sellers enjoy a very positive cash flow as all items are paid for in advance
- warranty and spares are usually taken care of by the manufacturer, not the seller
- the consumer carries all the responsibility and risk in relation to whether or not the product is suitable for them and effectively meets their needs.



Can the US internet sales model work in Australia?

Figure 2 of the Jenny Pearson report (2013, p 48) depicts the 'Market and Supply Chain for Aids and Equipment in Australia' (see Appendix B). Although it fails to highlight the myriad of services provided by Australian AT importers and full-service suppliers (see Figure 2 below) involved in the complex and moderately complex end of the AT market, it shows the necessary and complicated route to market for full-service AT retailers compared to the direct route via internet retailers.

The US internet sales model for aids and equipment is very reliant upon the consumer and the manufacturer residing in the same country, and explains why the model has not flourished in other world markets. Many of the normal services provided by full-service AT retailers (equipment trials, preparation of AT specifications, customisation, installation/setup, training of clients/care givers, debtor accounts, local spare part supply, etc.) are not included when purchasing over the internet (see Figure 4). In the US internet sales model issues arising from warranty claims, products not to specification and supply of spare parts become the responsibility of the manufacturer. Enforcing warranties for internet purchases is highly problematic when the consumer is in Australia and the manufacturer is in the USA.

Many foreign AT manufacturers attempt to prevent internet retailers from supplying items to overseas customers due to the lack of available support services and the associated risks. If someone orders a customised manual wheelchair and it is not built to specification, the costs of international freight alone that would be required to effectively resolve the issue are prohibitive.

International manufacturers are also cognisant of the need to support an importer/distributor in the local market to deliver after-sales support, comply with the Australian regulatory environment and maximise their market penetration and potential sales volumes. Few businesses would make the substantial investment required to bring a new product to market if they believed there was a risk that large numbers of consumers would bypass them and purchase offshore.

The internet sales model is very simple and therefore low cost. It is common for internet retailers to never interact directly with the consumer or physically handle the products that have been ordered. The consumer takes responsibility for finalising all product specifications and usually provides payment in full when lodging their order. The internet retailer simply checks that payment has been received and then forwards the order to the manufacturer to drop-ship the product when available. Custom products may have a 3–4 week build time and most manufacturers would offer the retailer at least a 30-day account which ensures a very positive cash-flow for the internet-only seller. Australian full-service AT retailers who supply government-funded schemes generally have to wait 50–180 days to receive payment, and this delay adds to costs. See Figure 4 for a summary of services provided by internet retailers compared to full service retailers.

Internet retailers also benefit from the very large number of products that they order, as many US manufacturers base their dealer discounts purely on volume. Australia's small market does not always consume the volumes required for AT importers or full-service AT retailers to obtain high volume discounts.

AT is a service-based industry

While the public perception of AT is that it is a goods-based industry, it is in fact a services industry structured around providing goods that are well-matched to an individual's needs, goals and environment. Services are particularly crucial in relation to complex and moderately complex AT. Understanding AT prices, the AT supply chain and the strengths and weaknesses of government AT procurement/subsidy programs requires a detailed understanding of the services provided by AT suppliers.

Given the highly competitive nature of the AT sector, provision of these services has been constantly modified and improved to ensure that they are provided as effectively as possible for the lowest costs achievable. All the services are essential, and all are related to achieving the best possible match between the individual and the AT. These services can be divided into two overlapping categories: services related directly to individuals, and services to the sector that facilitate achieving good individual outcomes (see Figure 4 for a complete list of services).

Services to individual consumers include:

- information and advice (including to the prescribing therapist)
- assistance selecting the 'right' product, including extensive investment in display and demonstration stock
- development of detailed specifications for an AT solution (for instance a power wheelchair may require specialised seating, postural support, electronic controls, and other options to maximise outcomes for the consumer)
- free home trials (including delivery, set-up, adjustment, instructions on use, pick-up/return)
- assembly/construction of the final AT product
- delivery, adjustments, instructions for use and maintenance
- maintenance, spares and repairs.

Services to the sector include:

- sourcing new products, including research and development of new products
- standards and compliance testing, including detailed product specifications
- training and education of prescribing therapists
- product inventory and spare parts (some of which are very time critical)
- warranties, product recalls and participation in standards development
- long-term loan of products to public sector organisations such as Independent Living Centres and spinal/rehabilitation facilities.

Information and advice from AT retailers are essential given the asymmetry of information in the market-place, as most prospective AT consumers will not be aware of the range of products, options and adjustment available on those products, customisations possible, what might be most suitable and beneficial to them including what some of the small differences between these items can make to consumers at an everyday level. In short, while there are some very experienced and 'expert' AT users, most consumers are often not able to judge the utility and suitability of different AT devices prior to purchase.

Likewise, AT prescribers (usually occupational therapists, physiotherapists and others) rely extensively on the expertise of full-service AT suppliers to help them manage the variety and complexity of available products in relation to matching these to consumers. Most therapists/prescribers are generalists and do not work exclusively with AT, and consequently cannot possibly be across the detailed knowledge

and skills required at the moderately complex and complex end of the AT market (see Summers & Walker 2013 for an extensive discussion of the complexities and skills required to provide effective AT solutions).

Additionally, in Australia, most therapists also rely extensively on training provided by AT suppliers to develop their expertise. Also, therapists and AT suppliers who have worked in other countries, particularly the USA, UK and NZ, report that AT retailers generally have to provide higher levels of service and assistance in Australia because therapists usually have lower levels of specialised AT training and skills. That is, some AT-related work that would routinely be done by therapists in other countries is usually undertaken by AT retailers in Australia, such as determination of complex specifications and adjustments to a wheelchair and associated seating.

The heterogeneity of individuals and their environment is one of the major drivers of the extensive diversity of AT products available in Australia, and this diversity itself is another indication of the robustness of competition between AT suppliers (manufacturers, importers, distributors and retailers). The heterogeneity of individual needs and aspirations of people with disability is also why full-service AT retailers require highly skilled and specialised staff to deliver effective solutions as complexity increases. Full-service AT retailers tend to invest considerable time and effort in skilling up their staff; even when recruiting experienced professionals such as occupational therapists it often takes several years of training by the AT retailer to bring them up to the required level. AT retailers also recruit relevant professionals from overseas such as rehabilitation engineers whose expertise is matching the biomechanics of the human body to available or customised AT devices.

Very small differences within and between products can make a tremendous difference to their suitability, safety and value for a particular individual, and the variety in the market-place is vast. For instance, at the middle and upper end of complex wheelchairs (manual and powered) there are numerous adjustments and options that can make the difference between an 'OK' solution and a 'fabulous' solution. See Appendix A for a sample wheelchair specification form for an indication of the complexity involved and the high level of skills required by AT retailers to achieve a good match between the individual and their AT. These service costs are built into the retail price in Australia, and are often not perceived or understood by consumers (or government procurement officers) only focusing on 'price'.

Importantly, a major source of the price difference between on-line sales and Australian full-service AT retailers is associated with the extent of skilled services provided by AT retailers (to individuals with disability and the sector more broadly), as well as the usual bricks-and-mortar costs faced by other retail sectors. For instance, many common items such as hoists, electric beds and wheelchairs are made available for in-home trials by AT retailers. A trial includes delivery, assembly/set-up/adjustments, instructions on use, determination of detailed specifications, pick-up and cleaning/sterilisation. This process also requires retailers to hold a very substantial range of demonstration and showroom stock, often in a wide variety of sizes and configurations. Significantly, Australian full service AT retailers only get paid for 'pre-sales' activities such as in-home trials when they actually make a sale. Anecdotally many retailers report making sales for approximately 50-60% of the trials they undertake. These services all come at a cost, and these are built into the retail pricing of AT in Australia, rather than charged separately.

A significant contributor to these service costs is that much of this activity takes place in the consumer's home, which substantially increases costs for travel, travel time for professionals and technicians, as well as multiple delivery and pick-up costs for equipment that is trialled as well as delivery of purchased items, pick-up and return of these items for adjustments, modifications, maintenance and repairs when required.

Australia's low population density (i.e. large land mass with less than 23M people) adds significant costs to a hands-on, service-based industry, particularly in relation to servicing rural and remote communities.

Additionally, at the higher end of complexity (in relation to both the AT device and the goals and environment of the AT user), significant time and skills are a major part of ensuring that a highly effective and individualised/customised solution is provided. For instance, a complex power wheelchair with specialised controls, customised seating/supports and related assessment, fitting/customisation, trialling and subsequent rounds of modifications may require an AT retailer to invest typically between 5 and 20 hours of highly skilled labour, but also sometimes up to 30–40 hours or more. Most AT retailers are successful only about 50–60% of the time after investing in this pre-sales work, meaning that half of the time the costs of advice, developing detailed specifications and in-home trialling do not result in a sale.

Who does what

A crucial part of understanding supply chain and service related price differences, particularly in relation to full-service AT retailers versus internet sellers, is through the details of who does what. As noted above there are numerous roles that must be undertaken, both at an industry/sector level and at an individual consumer level to ensure good outcomes for people with disability that maximise their independence and participation, and also good outcomes for government in relation to reduced costs over time, lower rates of equipment abandonment and increased revenue from participation in employment. Figure 4 outlines this in more detail, particularly in relation to full-service AT retailers (US and Australian) and US internet retailers. Figure 5 describes the different roles of consumers, therapists/prescribers and suppliers in relation to AT provision in Australia. Some major aspects of this are discussed below.

The many gaps in Figure 4 for the 'US online AT retailer model' relative to both the US and Australian full service retailers is one of the major reasons internet-only retailers can be so profitable and yet charge much lower prices to consumers. In the internet-only retail model all responsibility for selecting the most appropriate AT, assembly, adjustment, sourcing repairs and spares, as well as trying to enforce warranties (which are not covered by Australian consumer law when purchasing overseas) rests with the consumer. Full service AT retailers also absorb many of the costs for other industry-wide activities such as providing information and training to therapists, as well as on-site activities such as show-rooms and workshops. See the previous chapter 'Can the US internet sales model work in Australia?' for more details.

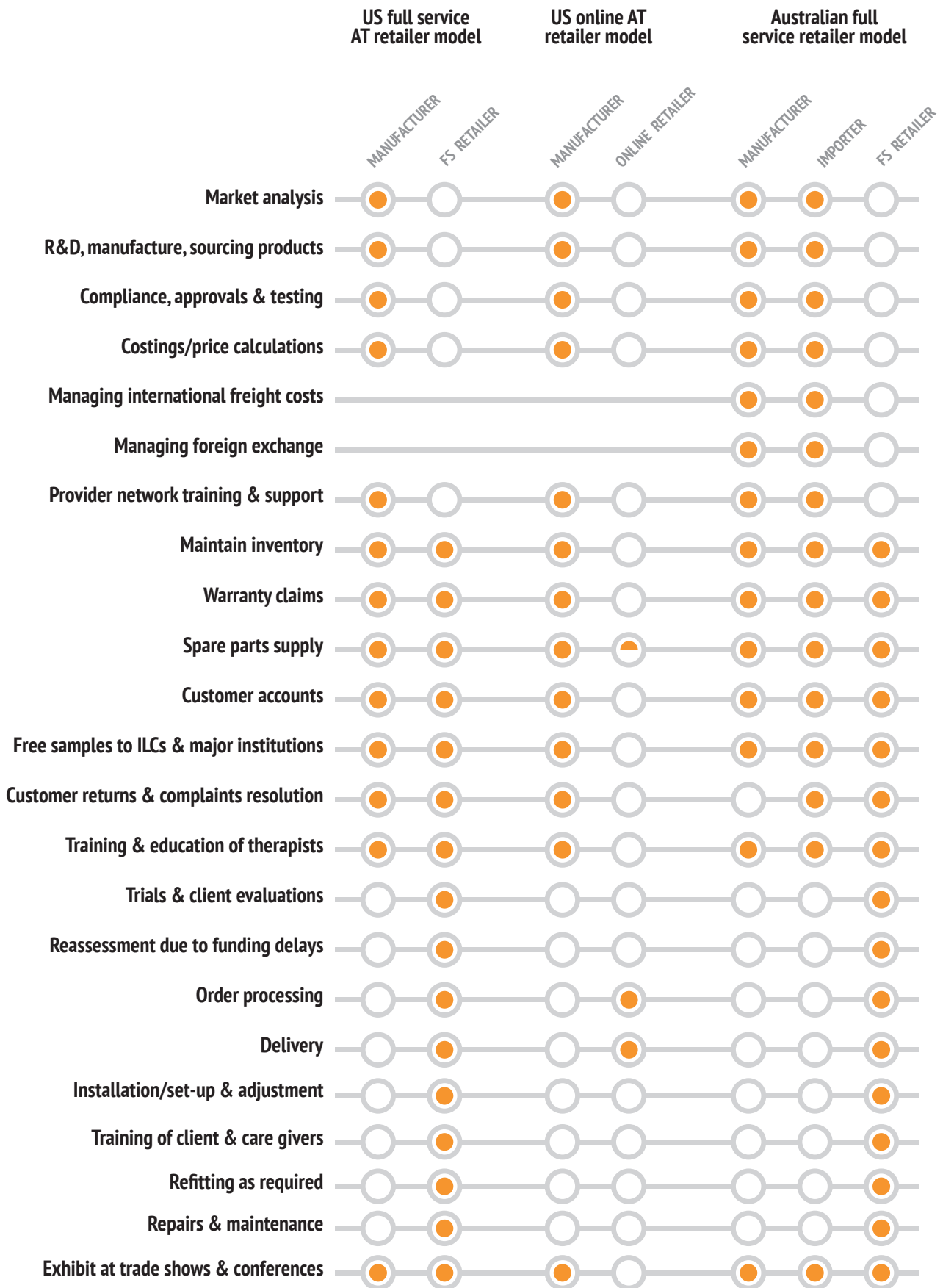
One of the keys to understanding how the supply chain functions in Australia is the requirement by the Therapeutics Goods Administration (TGA) for all Class 1 Medical Devices to comply with quality manufacturing standards and to be listed on the Australian Register of Therapeutic Goods (ARTG).

This includes wheelchairs, mobility aids, pressure care items, home oxygen devices, patient lifters, home care beds, postural supports, most mobility scooters, etc.

Consequently, Australian manufacturers have to prove their manufacturing processes meet an acceptable standard to be listed on the ARTG. Processes have to be in place to administer product safety recalls for defective products.

Businesses that import AT into Australia can do so only if they are registered as a 'Sponsor' with the TGA. This registration requires them to verify their appointment as the authorised importer by the overseas manufacturer and to guarantee that the manufacturing processes comply with the TGA's quality standards. Sponsors also have an obligation to administer product safety recalls, and maintain adequate records to enable the recalls. Importantly, in a private capacity individuals can lawfully import any items of AT without any reference to the TGA.

Figure 4: Suppliers' services within different delivery models



Australian legislation regarding consumer goods requires that products are fit for purpose and covered by a minimum statutory warranty. Local AT retailers cannot contract out of these obligations to reduce costs as the US internet retailers effectively do.

Figure 5 summarises the different roles undertaken by consumers, therapists/prescribers and suppliers (see also the related table in Appendix C that has more details and explanations). AT products vary widely in purpose and complexity, and similarly the details of the processes by which they are provided to consumers also vary. As a summary outlining the different roles, Figure 5 cannot illustrate this wide variability. It draws primarily from the middle level of the AT Pyramid – moderately complex AT. Very simple AT may follow a much different path, sometimes with the consumers simply purchasing what they need from a shop with very little involvement of therapists and/or suppliers. Extremely complex AT that may be custom built from the ground up for someone would likewise follow a very different pathway and is likely to involve teams of therapists and suppliers. Figure 5 summarises the range of processes that typically occur between these two extremes of the continuum.

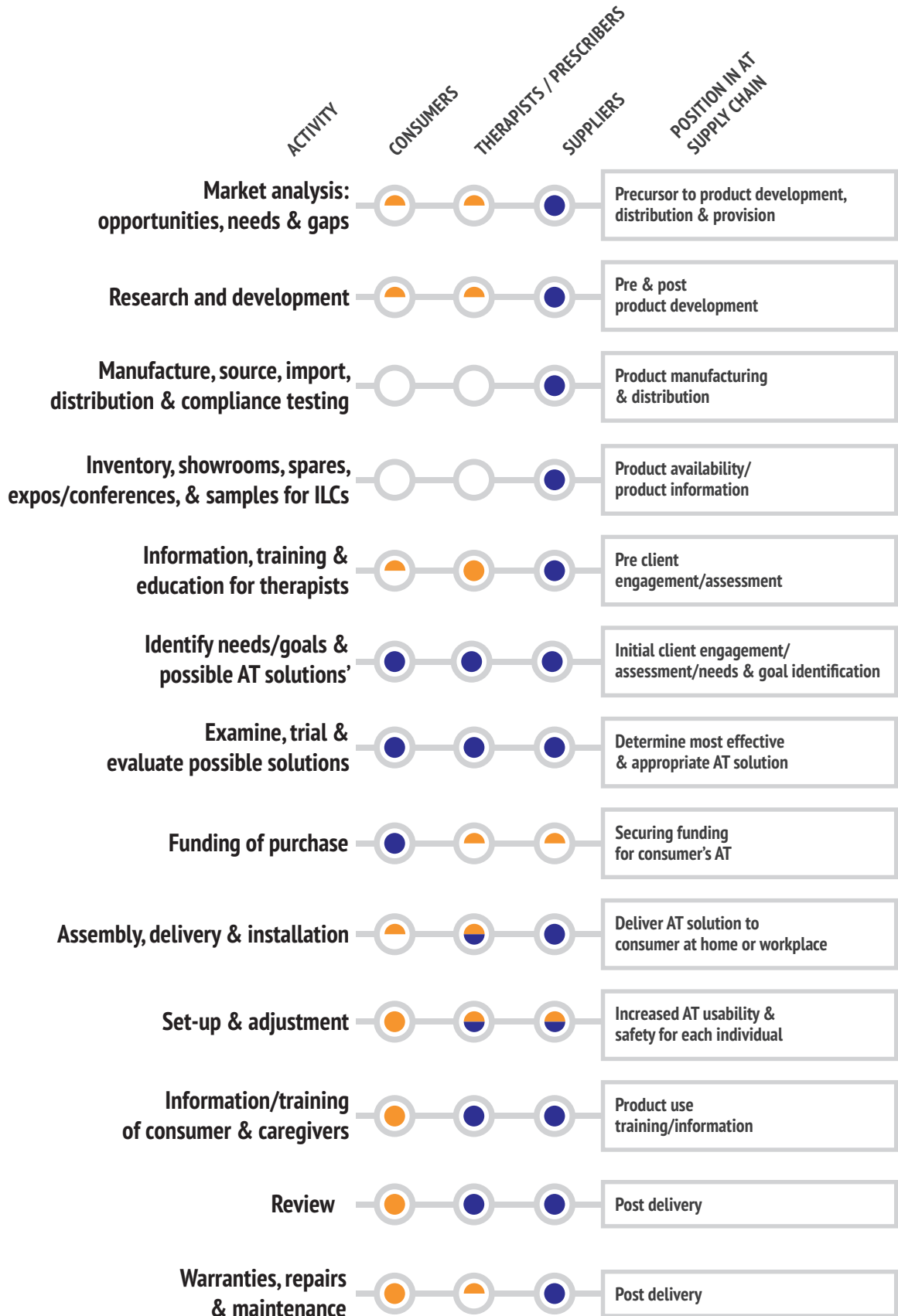
In addition, Figure 5 utilises two different colours to denote different kinds of involvement in the supply chain. Blue is used to emphasise who has responsibility to provide and deliver the activity. Gold indicates that people are involved in the activity, but are not primarily responsible for providing or undertaking the work. For example, in relation to ‘Funding of purchase’, the consumer is primarily responsible (and often receives assistance from government or philanthropic sources). Therapists have some involvement as they usually have to sign-off on the proposed AT purchase as being ‘appropriate’ for government and philanthropic funding, and sometimes help consumers identify possible sources of funding. Suppliers also have some involvement because they supply the quote to the consumer and/or other funder. Particularly in relation to work undertaken with consumers, roles and responsibilities can vary widely, so the details of this figure need to be considered as ‘indicative’ of what often or usually occurs, rather than as ‘definitive’ or ‘absolute’.

The roles of therapists/prescribers described in Figure 5 do not include the extensive work done by allied health professionals working within supplier organisations. Most suppliers of moderately and highly complex AT have allied health therapists on their staff. The work they do is incorporated under the ‘supplier’ heading. The roles of therapists/prescribers outlined in Figure 5 are often roles undertaken within the context of government-funded AT schemes where an ‘independent’ therapist/prescriber is required to assess and sign-off on the consumer’s needs and then provide the prescription for the best solution available within that particular AT funding scheme. Therapists/prescribers often rely extensively on the detailed product knowledge of suppliers to help identify the appropriate AT solution, which can require a relatively detailed and ongoing set of assessment and evaluation activities such as the in-home AT trials provided by suppliers.






Suppliers have a major role in developing and bringing products to the market, as well as providing both clinical and product-specific education and training to therapists/prescribers. Although most therapists/prescribers are primarily receivers of information, training and education (as indicated by the solid gold dot), some therapists/prescribers also provide teaching, training and mentoring and this is not illustrated in Figure 5, as it is difficult to illustrate this without making the figure much more complex.

Particularly towards the middle of this ‘who does what’ figure regarding assessment and AT selection, consumers, therapists/prescribers and suppliers all make major contributions to the process. These contributions/interactions illustrate the importance and centrality of an active partnership between these stakeholders to help ensure a good outcome for consumers.

Figure 5: Who does what



KEY

-  Major provider
-  Extensive involvement
-  Some provision
-  Some or limited involvement
-  No involvement or provision

Requirements regarding set-up and adjustment of AT can vary widely, depending on the nature of the AT. Senior therapists/prescribers often emphasise that this should be the role of the therapists, but acknowledge that therapists do not always have the skills or capacity to do it. Particularly when work needs to be done in a workshop, or the set-up and adjustment is highly technical or has particular requirements that are better understood by the supplier, suppliers do this work. Typically who takes responsibility for this work depends on the complexity of the AT, expertise of the therapist, expertise of the supplier and the nature of the adjustment and set-up that is required.

At the manufacturer, importer, distributor end of the supply chain, some of often hidden costs include R&D, sourcing cutting-edge AT, and standards compliance and testing.

AT suppliers also provide a wide range of education and training to others: prescribing therapists; consumers/families and their paid caregivers. Importers, manufacturers and distributors train staff in retailers' businesses regarding existing and new products, their appropriate use/set-up/options/safety and so forth, as well as therapists/prescribers. Full-service retailers provide similar training to therapists/prescribers, as well as training purchasers of AT, their families and carers in the use of those products.

Providing 'free' AT for display and demonstration to various organisations such as Independent Living Centres, spinal injuries units and specialist rehabilitation centres is often done in Australia by a combination of manufacturers, importers, distributors and full-service retailers. Additionally, one of the major costs for full-service AT retailers is the requirement to maintain sufficient breadth and depth of stock for both display and trialling in their retail premises. This can be extensive given the wide range of sizes and options across product ranges.

Retailers of complex AT have to carry an extensive suite of devices and accessories so they can trial various solutions for consumers, usually with input from a prescribing therapist. For example, it is common for a provider to visit a consumer's home with a number of manual or electric wheelchairs, different types/sizes of cushions and backrests, along with additional postural supports and other accessories. Trial equipment is essentially a sunk cost as it is rarely able to be resold and needs to be constantly upgraded as newer versions are released. A medium to large specialist AT retailer would carry over \$750,000 in trial items to support their business and this inventory is in addition to what is for sale.

Many other activities undertaken by full-service AT retailers have already been mentioned such as supplying detailed product information and advice to both prescribers and consumers, working with consumers and prescribers to get the 'right match' of AT to the user, developing detailed specifications, in-home trials (including delivery, set-up, adjustment, training, and removal), warranty, repairs and spares.

Finally, in relation to who-does-what, at a background and contextual level it is important to understand that the best arrangement to ensure that AT effectively meets a consumer's needs, environment and aspirations, and delivers the best possible outcomes involves a strong partnership between the consumer, the prescribing therapist and the AT retailers. Each party brings essential knowledge and skills to the partnership. Notwithstanding this, there is a common tendency for people who are not directly involved at the coal-face in the day-to-day provision of AT to believe that the prescribing therapist undertakes all of the essential activities. Such misconceptions contribute to perceptions that AT pricing is excessive as it inadvertently ignores the substantial costs borne by AT retailers to provide the essential services required to undertake their role in the partnership.

Conclusion

Available evidence through well-conducted price comparisons of AT in Australia and other countries demonstrates clearly that AT prices in Australia are both fair and reasonable, and relatively low in comparison to prices elsewhere when like-for-like comparisons are carefully conducted across a range of AT products. Prices set by Australian AT retailers are a reflection of the costs of the products they sell and the essential services provided that are often included as part of the retail price. Product costs for AT retailers are usually subject to importation costs including shipping, customs and port charges, as well as being impacted by currency exchange rate fluctuations. The industry is not particularly profitable in Australia as a result of high levels of competition; the high levels of services provided by specialist AT retailers; and the high costs of doing business in Australia.

Internet prices for AT, particularly from internet-only AT retailers operating out of the USA (and sometimes from the UK), are substantially lower than typical Australian retail prices because (a) there are no services included in the prices of internet-only retailers; (b) the purchaser is responsible for ensuring suitability of purpose, fit, assembly/adjusting, training, and sourcing spares and repairs; (c) Australians purchasing AT from overseas websites do not have access to Australian consumer protections regarding warranties and purchaser supports routinely required by legislation in Australia; and (d) internet-only sellers do not have to cover the costs of inventory, demonstration and trial stock, in-home AT trials, spare parts, bricks-and-mortar shops, warranties, and skilled AT professionals working in conjunction with the consumer and their therapist/prescriber to develop the most effective individualised AT solution.

The wide range of services provided by AT retailers, and also manufacturers, importers, distributors, are essential to ensuring a good fit between the individual and their AT, particularly at the moderately to highly complex end of the AT pyramid. Any substantial efforts to further reduce AT retail prices are likely to reduce the provision of these essential services to both AT consumers and their therapists/prescribers, which in turn will result in worse outcomes for consumers and higher costs and lower productivity over time.



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Appendix A: Wheelchair specification form example

ORDERING INFORMATION: Phone: (02) 9678 6600 • Fax: (02) 9678 6655 • Email: orders@sunrisemedical.com.au

ACCOUNT INFORMATION

Account:	_____	Ship To:	_____
Date:	_____	Name:	_____
PO#:	_____	Address:	_____
Therapist:	_____	City / State:	_____
Customer Name:	_____	Postcode:	_____
Rep Name & Phone:	_____	Phone:	_____

This is an interactive order form when used in an MS Excel application. Please note selections must be made in order, starting from Page 1. To activate it, simply change the "0" to "1". This will highlight the selection for you. Text boxes will pop up as you go through the script, with reminders of what you are able to do.

NOTE: Rather than not making any selections, either select "Omit" or write "Omit" next to it so that we know it isn't an option. This form can be printed & used manually if required.

QUICKIE QM-710™ BC

0	172PC67	Quickie QM-710 BC With ASAP II Seat	\$6,152
		<i>See Fig 1.1</i>	
		Base Package Includes:-	
		RNET 90A Expandable Drive Control	
		136kg 10kph 4-Pole Motor Package	
		ASAP II Rehab Seat Frame	
		14" Drive Wheels with flat free insert	
		8A Dual Mode (Compact) CTE	

FIGURE 1.1 QM-710™ BC



QUICKIE QM-710™ SC

0	172PC68	Quickie QM-710 SC for SPOT Tilt or Recline	\$6,152
		<i>See Fig 1.2</i>	
		Base Package Includes:-	
		RNET 90A Expandable Drive Control	
		136kg 10kph 4-Pole Motor Package	
		ASAP II Rehab Seat Frame	
		14" Drive Wheels with flat free insert	
		8A Dual Mode (Compact) CTE	

FIGURE 1.2 QM-710™ SC



QUICKIE QM-710™ MPC

0	172PC69	Quickie QM-710 MPC SPOT Tilt / Recline	\$6,152
		<i>See Fig 1.3</i>	
		Base Package Includes:-	
		RNET 90A Expandable Drive Control	
		136kg 10kph 4-Pole Motor Package	
		Recline Seat Frame	
		14" Drive Wheels with flat free insert	
		8A Dual Mode (Compact) CTE	

FIGURE 1.3 QM-710™ MPC (Shown with optional Seat Elevator)



2. BASE CHAIR OPTIONS

SHROUD COLOUR			
0	172EZ01	Candy Apple Red	\$0
0	172EZ02	High Gloss Black	\$0
0	172EZ03	Candy Blue	\$0
0	172EZ04	Silver	\$0
0	172EZ05	Copper	\$0

PRE-SET SEAT FRAME ANGLE			
0	172FA10	0°	\$0
0	172FA3	3°	\$0
		(N/A with Lift)	
0	172FA4	6°	\$0
		(N/A with Tilt, Recline or Lift)	
0	172FA5	9°	\$0
		(N/A with Tilt, Recline or Lift)	

USER WEIGHT			
0	172WG06	Less than 68kg	\$0
0	172WG13	68 - 90kg	\$0
0	172WG14	91 - 113kg	\$0
0	172WG03	113 - 136kg	\$0

SEAT HEIGHT			
<i>Measured in the front. Obtain a Quote to verify estimated STFH.</i>			
0	172HT44	Lowest STFH	\$0
0	172HT45	+1" STFH	\$0
		(N/A with Lift / Tilt Combination)	
0	172HT46	+2" STFH	\$0
		(N/A with Lift / Tilt Combination)	

DRIVE WHEEL			
0	172DW37	14" Cast Wheel Solid Inserts (Knobby)	\$0
0		14" Cast Wheel Pneumatics (Knobby)	\$0

MOTOR PACKAGE			
0		10Kph Standard Package	\$0
0		8Kph High Torque Package	\$616

TRANSIT OPTION			
0	172TO25	4 Point Transit Package (N/A with Vent)	\$0
0	172TO40	Omit Transit	\$0

WHEEL LOCKS			
0	172WL42	Wheel Locks	\$154

VENTILATOR OPTIONS			
<i>N/A with Transit Option or Lift Module</i>			
0	172VT7	Articulating Vent Tray	\$1,606
0	172VT4	Fixed Vent Tray (Pulmonic LTV Models) (N/A with Recline)	\$505

STFH MATRIX			
Seating Type & Power Option Combinations	Seat-to-Floor Height at 0 Tilt		
	Lowest	+1"	+2"
ASAP II No power seating	17.5"	19.5"	20.5"
ASAP II Lift only	19.0"	20.5"	21.5"
ASAP II Tilt only	19.0"	20"	21"
ASAP II Tilt & Lift	21.5"	N/A	N/A
Power Recline Only Seat	16.5"	18.5"	19.5"
Power Recline & Lift Seat	18.0"	19.5"	20.5"
Tilt & Power Recline Seating	17.0"	18.5"	19.5"
Lift / Tilt & Power Recline Seat	20.0"	21.5"	N/A

Adding seat angle will increase STFH by 1" for each incremental change.
Actual STFH may vary by 0.5"

3. BATTERIES & CHARGERS			
BATTERIES (GEL CELLS)		BATTERY CHARGER	
0	MK 73 AH Batteries Pair	0	172BJ19 8A Dual Mode (Compact) CTE \$0
		0	172BJ3 Omit Charger -\$62

4. ELECTRONICS			
DRIVE CONTROL OPTIONS		SWITCH MOUNT BRACKET	
0	RNET Expandable Drive Control (90A)	STD	
0	172EM01	Single Switch Mount Bracket	\$300
0	172EM02	Dual toggle switch mount bracket	\$300
0	172EM03	4-way toggle switch mount bracket	\$300
SPECIALTY DRIVER CONTROL OPTIONS			
<i>Requires OMNI. All packages must also select OMNI.</i>			
<i>Only with solid backs</i>			
0	172I1	Quick Sip n' Puff System (Includes headrest & removeable mount)	\$2,803
0		ASL Head Array Package (Adult) (Includes headrest & removeable mount)	\$4,389
0	172I103	ASL Head Array Package (Peadiatric) (Includes headrest & removeable mount)	\$4,389
0	172I104	Switch-It Head Array Package (Adult) (Includes headrest & removeable mount)	\$4,389
0	172I105	Switch-It Head Array Package (Peadiatric) (Includes headrest & removeable mount)	\$4,389
0	172ID36	ASL Porportional Mini Joystick Chin / Lip Control Package Mini Joystick (Includes headrest & removeable mount)	\$4,605
0	172ID37	ASL Porportional Mini Joystick Midline with Gatlin Package (Includes headrest & removeable mount)	\$4,605
0	172ID45	Quickie Proportional Chin Control Package (Includes headrest & removeable mount)	\$3,927

LED JOYSTICK AS ATTENDANT CONTROL (Mounted on Back Cane)			
<i>Includes a 1 hour labour charge</i>			
0		As Standalone (no user joystick)	\$456
0		Addition - chair also has client joystick	\$1,124

COMPACT JOYSTICK			
0		RNET compact joystick with 2 switches & mount, including external mounting port, if required.	\$2,849
0		Chin	
0		Right Hand Side	
0		Left Hand Side	

JOYSTICK MOUNT (FIXED or SWING AWAY)			
0	172JM10	Fixed Mount	\$0
0	172JM11	Swing Away Mount	\$325

JOYSTICK MOUNT (LOCATION)			
<i>Height Adjustable</i>			
0	172HM1	Right Side Mount	\$0
0	172HM2	Left Side Mount	\$0

JOYSTICK HANDLE (OPTIONAL)			
0	172JH1	Ball Handle	\$105
0	172JH2	Foam Ball Handle	\$105
0	172JH4	T-Handle	\$105
0	172JH6	Goalpost	\$105

RNET OMNI & OUTPUT OPTIONS			
<i>Choose All That Apply</i>			
0	172ON1	RNET OMNI Input Control Module & Display w/ built-in infrared & armrest mount. Choose mount below. (Required for Specialty Input Devices)	\$847
0	172ON2	RNET Output Module (ECM)	\$1,617
0	172ON3	RNET Bluetooth Mouse-mover	\$770

OMNI MOUNT			
<i>If used with a Joystick, it must be mounted on the opposite side.</i>			
0	172DS03	Swing Away Left Side OMNI Mount	\$362
0	172DS04	Swing Away Right Side OMNI Mount	\$362

SWITH INPUTS FOR JOYSTICKS or OMNI			
<i>Drive or Mode / Profile Control</i>			
0	172DSW22	Stereo to 2 Mono Splitter	\$91
0	172DSW6	Ribbon Switch	\$145
0	172DSW1	Buddy Button Switch	\$116
0	172DSW2	Disc Switch	\$245
0	172DSW9	Wobble Switch	\$770
0	172DSW4	Micro Light Switch	\$116
0	172DSW24	Egg Switch - Black	\$116
0	172DSW21	Dual Toggle Switch Only	\$262
0	172DSW19	Penta Switch with DB9 Connector	\$305
0	172DSW20	CA5 5 Switch Adapter with DB9 Connector	\$231
0	172DSW23	4-way Toggle Switch with 5th Button DB9 Connector	\$262

ATTENDANT CONTROL			
0	1720A02	Attendant Control for RNET	\$996

ATTENDANT MOUNTING LOCATION			
0	172DN1	Mounting Location: Right Back Cane	\$0
0	172DN2	Mounting Location: Left Back Cane	\$0

ELECTRONIC PROGRAMMERS			
0	172PR5	RNET PC Programmer with Dongle	\$693
0	172PR6	DTT (Hand Held Programmer)	\$847

SWING AWAY CHIN MOUNT			
0		Manual Swing Away Option	\$616
0		Powered Swing Away Option	\$3,542
0		Operate with a Buddy Button	N/C
0		Swing Away Direction	\$0
0		Left	
0		Right	
0		ASL Mini Joystick Mount Bracket	N/C
0		PG Compact Joystick Mount Bracket	N/C

5. SEAT TYPE						
0	172ST56	Quickie ASAP II (Adjustable Seating & Positioning) (Choose Seat Frame Size Platform)	\$0	0	172ST57 Power Recline Seat Frame (G) (Not Width Adjustable)	\$0

ASAP II FRAME SIZE			
Each Frame is width & depth adjustable withing a given range			
0	172FU17	Adjustable 12 x 12" to 16 x 19" (A)	\$0
0	172FU18	Adjustable 16 x 12" to 20 x 20" (B)	\$0
0	172FU19	Adjustable 18 x 16" to 22 x 22" (C)	\$0

NOTE: If you have Tilt & Recline with shear, you must select the Power Recline Seat Frame.

6. SEAT SIZE

Seat Size Matrix. Seat type is chosen in section 5.

A = ASAP II Seat Frame
(Adjustable from 12x12 to 16X19)

B = ASAP II Seat Frame
(Adjustable from 16X12 to 20X20)

C = ASAP II Seat Frame
(Adjustable from 18X16 to 22X22)

		ASAP II Seat Width									
		12"	13"	14"	15"	16"	17"	18"	19"	20"	22"
Seat Depth	12"	A	A	A	A	A	B	B	B	B	
	13"	A	A	A	A	A	B	B	B	B	
	14"	A	A	A	A	A	B	B	B	B	
	15"	A	A	A	A	A	B	B	B	B	
	16"	A	A	A	A	A	B	B	B,C	B,C	B,C
	17"	A	A	A	A	A	B	B	B,C	B,C	B,C
	18"	A	A	A	A	A	B	B	B,C	B,C	B,C
	19"	A	A	A	A	A	B	B	B,C	B,C	B,C
	20"						B	B	B,C	B,C	B,C
	21"								C	C	C
22"								C	C	C	

G = Recline Seat (not adjustable)

		Recline Seat Width					
		16"	17"	18"	19"	20"	22"
Seat Depth	16"	G	G	G	G	G	G
	17"	G	G	G	G	G	G
	18"	G	G	G	G	G	G
	19"	G	G	G	G	G	G
	20"	G	G	G	G	G	G

SEAT WIDTH			
0	172R21	Seat Width: 12"	\$0
0	172R22	Seat Width: 13"	\$0
0	172R23	Seat Width: 14"	\$0
0	172R24	Seat Width: 15"	\$0
0	172R5	Seat Width: 16"	\$0
0	172R6	Seat Width: 17"	\$0
0	172R7	Seat Width: 18"	\$0
0	172R8	Seat Width: 19"	\$0
0	172R9	Seat Width: 20"	\$0
0	172R25	Seat Width: 22"	\$0

SEAT DEPTH			
0	172RF20	Seat Depth: 12"	\$0
0	172RF21	Seat Depth: 13"	\$0
0	172RF22	Seat Depth: 14"	\$0
0	172RF23	Seat Depth: 15"	\$0
0	172RF5	Seat Depth: 16"	\$0
0	172RF6	Seat Depth: 17"	\$0
0	172RF7	Seat Depth: 18"	\$0
0	172RF8	Seat Depth: 19"	\$0
0	172RF24	Seat Depth: 20"	\$0
0	172RF26	Seat Depth: 21"	\$0
0	172RF25	Seat Depth: 22"	\$0

7. SEAT CUSHIONS

Please refer to the Jay Retail Price Book for a full list of our Jay Cushions & write this as a separate line item on your PO.

0	172CU1	2" Cushion	\$120
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8. POWERED SEATING

POWER SEATING OPTIONS (SC & MPC MODELS)			
0	172PJ2	Quickie SPOT 50° CG Tilt	\$2,803
0	172PA6	Recline with Power Shear Reduction Only	\$5,256
0	172PA7	Tilt & Recline with Power Shear Reduction	\$9,235

POWERED SEATING CONTROL METHOD CONT.			
0	172EO12	Switch Control 2 - 3 Actuator with 4-way Toggle Switch & Mount. (Capable of operating combo of Tilt / Lift or legs only)	\$0
0	172EO13	Thru Drive 1 Actuator (For operating Tilt or Lift through Joystick)	\$0
0	172EO14	Thru Drive 2+ Actuator (ISM module) (ISM is standard if selecting the Lights & Indicators Package below) (For operating more than one actuator through Joystick)	\$996

POWERED SEAT ELEVATOR - 9" TRAVEL			
0	172PA8	Power Seat Elevate (adds 3" to STFH)	\$2,988

POWERED SEATING CONTROL METHOD			
For use with power seating actuators. Switch activations stand-alone & does not require thru drive electronics			
0	172EO10	Switch Control 1 actuator with dual toggle & mount (For operating Tilt or Lift)	\$0
0	172EO11	Switch Control 1 actuator with buddy button & mount (For operating Tilt or Lift)	\$0

POWERED SEATING CONTROL METHOD			
For use with switch control powered seating			
0	172EY01	Switch Mount Right	\$0
0	172RF25	Switch Mount Left	\$0

9. BACKREST & BACK OPTIONS			
BACKREST FRAME TYPE		BACK TYPE (UPHOLSTERY OR SOLID)	
0	172BT8	Angle Adjustable (ASAP II Seat Only)	\$0
0	172BT98	Manual Recline 40° (ASAP II Seat Only) (Not width adjustable)	\$655
0	172TB89	Power Recline (Power Recline Seat Only)	\$0
MANUAL RECLINE ADJUSTMENT METHOD OPTION (ASAP II)			
<i>Back Height is set at 23"</i>			
0	172MN01	Tool	\$0
0	172MN02	Knob (N/A with dual post arms)	\$0
ANGLE ADJUSTABLE BACKREST OPTIONS (ASAP II)			
<i>N/A with manual recline</i>			
<i>N/A with power recline</i>			
0	172DO8	Non Folding backrest	\$0
0	172DO9	Folding backrest (ASAP II only)	\$169
CANE ANGLE (ASAP II)			
0	172BP40	Straight Back Cane Post	\$0
TOWEL BAR DEPTH (ASAP II)			
0	172QT03	Shallow (N/A with upholstery backs)	\$0
0	172QT04	Deep (Extends 4" from back canes for deep backs)	\$0
BACK CANE (ASAP II)			
<i>Upholstery Height Measured Pan to top of upholstery</i>			
0	172B1	Low - 15.5"	\$0
0	172B5	Medium - 17.5"	\$0
0	172B9	Tall - 19.5"	\$0
POWER RECLINE BACKREST PRESENT HOME ANGLE			
0	172QK1	90°	\$0
0	172QK2	95° (Default)	\$0
0	172QK3	100°	\$0
BACK HEIGHT			
<i>Required for SPOT Curved, SPO Backs & Recline Backs</i>			
<i>Limited combinations of widths</i>			
<i>Measured from pan to top of solid back.</i>			
0	172B132	14" (N/A with power recline seating)	\$0
0	172B36	16" (N/A with power recline seating)	\$0
0	172B38	18" (N/A with power recline seating)	\$0
0	172B40	20" (N/A with power recline seating)	\$0
0	172B42	22" (Available on all back types)	\$0
0	172B44	24" (Available on all back types)	\$0
0	172B140	26" (Available on all back types)	\$0
0	172B141	27" (Only available on power recline)	\$0
0	172B142	28" (Only available on power recline)	\$0
JAY 3 OPTION (ASAP II)			
0	172JB01	Jay J3 (N/A with recline unless prior approval) (Please write as a separate line item on your PO)	See J3 OF
10. HEADREST OPTIONS			
<i>Available with on-chair solid backs. Headrests for Jay 3 Backs need to be ordered on the J3 Back Order Form</i>			
0	172HE65	Whitmyer Linx Headrest 8" Plush Plush Head Support Pad 8" x 4.5"	\$424
0	172HE66	Whitmyer Linx Headrest 10" Plush Plush Head Support Pad 10" x 4.5"	\$424
11. POSTURAL SUPPORTS			
<i>ALL postural supports are sold as EACH.</i>			
<i>Must select both left and right for a pair.</i>			
SWING AWAY LATERAL THORACIC SUPPORT - LEFT		SWING AWAY LATERAL THORACIC SUPPORT - RIGHT	
0	Swing Away Lateral Thoracic Support 4x5" - Left	0	Swing Away Lateral Thoracic Support 4x5" - Right
0	Swing Away Lateral Thoracic Support 4x6" - Left	0	Swing Away Lateral Thoracic Support 4x6" - Right
LONG THIGH SUPPORT WITH REMOVEABLE MOUNT		CHEST STRAP	
<i>Available with Cantilever Arms</i>			
<i>N/A with Manual Recline Back, Dual Post, Single Post or Cantilever w/ 2pt Locking Arms</i>			
0	Long Thigh Support - Left - Removeable	0	172ZR03 Padded Chest Strap
0	Long Thigh Support - Right - Removeable		\$393
SWING AWAY KNEE ADDUCTOR SUPPORTS - LEFT		SWING AWAY KNEE ADDUCTOR SUPPORTS - RIGHT	
<i>Available only with fixed & power centre mount legrests.</i>			
<i>N/A with Dual Post Armrest.</i>			
<i>Choose Pad Size & Arm Size</i>			
0	Pad Size	0	Pad Size
0	172KB5 Knee Adductor Pad Small - Left	0	172KB6 Knee Adductor Pad Small - Right
0	172KB7 Knee Adductor Pad Large - Left	0	172KB8 Knee Adductor Pad Large - Right
0	S/A Arm Size	0	S/A Arm Size
0	172XX04 Swing Away Short - Left	0	172XX05 Swing Away Short - Right
0	172XX06 Swing Away Long - Left	0	172XX07 Swing Away Long - Right

12. ARMREST & ARMPAD OPTIONS

Please choose either Option A or Option B

0 Option A: Armrest Options for ASAP II Seating

0 Option B: Armrest Options for Power Recline Seating

12A. ARMREST OPTIONS FOR ASAP II SEATING

ARMREST MOUNTING FOR ASAP II (NO TILT OR RECLINE)				ARMREST MOUNTING FOR ASAP II (WITH TILT)			
Dual Post Armrests				Dual Post Armrests			
0	172EG01	Short Dual Post Flip Back 10" Height	\$0	0	172EG09	Short Dual Post Flip Back HT Adj. 10 - 15"	\$0
0	172EG21	Long Dual Post Flip Back 10" Height	\$0	0	172EG23	Long Dual Post Flip Back HT Adj. 10 - 15"	\$0
0	172EG02	Short Dual Post Flip Back HT Adj. 10" - 15"	\$231				
0	172EG22	Long Dual Post Flip Back HT Adj. 10" - 15"	\$231				
Cantilever Armrests				Cantilever Armrests			
<i>Adjustable length armpad included (Choose pad below, except for Low Arm Option) N/A with Manual Recline Back</i>				<i>Adjustable length armpad included (Choose pad below, except for Low Arm Option) N/A with Manual Recline Back</i>			
0	172EG03	Standard Cantilever Arm with 2 Point Locking Post (9" - 10" Ht Range) (N/A with seat depths below 16")	\$216	0	172EG10	Standard Cantilever Arm with 2 Point Locking Post (9" - 10" Ht Range) (N/A with seat depths below 16")	\$0
0	172EG04	Standard Cantilever Arm with 2 Point Locking Post (11" - 12" Ht Range) (N/A with seat depths below 16")	\$216	0	172EG11	Standard Cantilever Arm with 2 Point Locking Post (11" - 12" Ht Range) (N/A with seat depths below 16")	\$0
0	172EG05	Standard Cantilever Arm 9" - 12" Height Range	\$0	0	172EG12	Standard Cantilever Arm 9" - 12" Height Range	\$0
0	172EG06	Low Cantilever Arm 7" - 10" Height Range (Choose ASAP II Pad type & size below)	\$0	0	172EG13	Low Cantilever Arm 7" - 10" Height Range (Choose ASAP II Pad type & size below)	\$0
Single Post Armrests				Omit Armrest			
0	172EG07	Single Post Height Adjustable - Standard	\$231	0	172EG20	Omit Armrest & Mounts	\$0
0	172EG08	Single Post Height Adjustable - Low	\$231				

ARMPAD OPTIONS FOR ASAP II

Pad type / size options for Dual Post / Single Post / Low Cantilever							
Left Armpad				Right Armpad			
0	172AE01	Desk Length Waterfall (10")	\$0	0	172AB01	Desk Length Waterfall (10")	\$0
0	172AE02	Full Length Waterfall (14")	\$0	0	172AB02	Full Length Waterfall (14")	\$0
0	172AE03	Desk Length Standard (10")	\$0	0	172AB03	Desk Length Standard (10")	\$0
0	172AE04	Full Length Standard (14")	\$0	0	172AB04	Full Length Standard (14")	\$0
Pad type / size options for Standard Cantilever Arm							
Left Armpad				Right Armpad			
0	172AE11	Full Length Cantilever (14")	\$0	0	172AB11	Full Length Cantilever (14")	\$0
0	172AE10	Desk Length Cantilever (10")	\$0	0	172AB10	Desk Length Cantilever (10")	\$0

12B. ARMREST OPTIONS FOR POWER RECLINE SEATING

ARMREST FOR POWER RECLINE SEATING			
<i>Recline Seat Frame Only</i>			
0	172EG16	Standard Ht Reclining Armrest Short (10.8" - 14")	\$385
0	172EG17	Tall Ht Reclining Armrest Short (12.8" - 16")	\$385
0	172EG18	Standard Ht Reclining Armrest Long (10.8" - 14")	\$385
0	172EG19	Tall Ht Reclining Armrest Long (12.8" - 16")	\$385
Omit Armrest			
0	172EG20	Omit Armrest & Mounts	\$0

RECLINING ARMPAD OPTIONS

Standard Reclining Armpad - Left			
0	172EG05	Reclining Armpad (16")	\$0
Standard Reclining Armpad - Right			
0	172AB05	Reclining Armpad (16")	\$0
Ottobock Reclining Armpad - Left			
<i>Power Recline Seat Only</i>			
0	172AE08	Small Forearm Pads (8")	\$123
0	172AE06	Medium Forearm Pads (11.5")	\$123
0	172AE07	Large Forearm Pads (14")	\$123
Ottobock Reclining Armpad - Right			
<i>Power Recline Seat Only</i>			
0	172AB08	Small Forearm Pads (8")	\$123
0	172AB06	Medium Forearm Pads (11.5")	\$123
0	172AB07	Large Forearm Pads (14")	\$123
Ottobock Hand Pad Options - Left			
0	172OL01	MD Flat Hand Pads (4½" x 7")	\$85
0	172OL02	LG Flat Hand Pads (5½" x 9")	\$85
Ottobock Hand Pad Options - Right			
0	172OR01	MD Flat Hand Pads (4½" x 7")	\$85
0	172OR02	LG Flat Hand Pads (5½" x 9")	\$85

13. HANGERS & FOOTRESTS FOR ASAP II

Hanger & Extension Tube Options (See Footplate Compatibility in the brackets)

NON POWERED SWING AWAY LEGRESTS

Sold as Pairs

0	172H95	65° Swing Away	(A, B, C)	\$0
0	172H2	70° Swing Away	(A, B, C)	\$0
0	172H94	75° Tapered Swing Away	(E)	\$0
0	172H6	90° Swing Away	(B, C) (5.5 - 9")	\$0
0	172H138	Manual ELR S/A	(A, B, C, D)	\$370

(Available with Fixed Centremount, choose below)

POWERED ELEVATING LEGRESTS

0	172H125	Centremount Power ELR with Articulation	(F, G, H)	\$1,441
0	172H126	S/A Power ELR with Articulation (PR)	(B)	\$1,441

(N/A for 12" or 13" wide)
(Available with Fixed Centremount, choose below)

FIXED CENTRE MOUNT LEGRSTS (INCLUDE FOOTPLATE)

0	172H134	Fixed Centre Mount Short		\$0
0	172H135	Fixed Centre Mount Long		\$0

OMIT HANGERS

0	172H144	Omit Hangers		\$0
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HANGER EXTENSIONS (SEE RANGE LISTED IN MATRIX BELOW)

NOTE: Not all extension tubes will be available. Depending on seat height, some extension tube options may not offer enough ground clearance.

0	172E16	High Mount Hanger		\$0
0	172E1	Short		\$0
0	172E2	Medium		\$0
0	172E5	Long		\$0
0	172E21	Omit Extension		\$0

Lower Leg Length Matrix (measured seat pan to the top of the footplate surface)				
Hanger Type	High Mount	Short	Medium	Long
65° Swing Away	7-14"	13.5- 16"	16-18.5"	18-20.5"
70° Swing Away	7-14"	13.5- 16"	16-18.5"	18-20.5"
75° Tapered S/A	7-14"	13.5- 16"	14.5-19"	15-18"
90° Swing Away	5.5-9" Footplate mounts to front of hanger.			
Manual ELR S/A		12.5-17"	14.5-19"	17-21"
Power ELR S/A		12-14"	14-17"	16.5-19"
Fixed Cntrmnt		12.5"-15.5"		14.5"-19.5"
Power Cntrmnt	13.5-18.5"			16.5-21.5"

FOOTPLATE (PR)

0	A - Composite with Heel Loop (PR)	\$0
0	B - Adult Angle Adjust with heel loop for use with 65° & 70° hanger & ELR (PR)	\$125
0	B - Adult Angle Adjust with heel loop for use with 90° hanger (PR)	\$125
0	C - Kids angle Adjust with Leg Strap for use with 65° & 70° hanger & ELR (PR)	\$125
0	C - Kids angle Adjust with Leg Strap for use with 90° hanger (PR)	\$125
0	D - Aluminium (PR)	\$46
0	E - 1 Piece Angle Adjust. Footplate with Leg Strap (PR)	\$300
0	F - Centremount Single Footplate	\$0
0	G - Centremount Dual Footplate Heel Loop	\$323
0	H - Centremount High Mount Footplate	\$323

FOOTREST ACCESSORIES

0	1725A01	Toe Loop (PR) (Only available on Option B)	\$40
0	172LS14	Extra Leg Strap	\$40

Footplate Matrix									
Hanger Type	A	B	C	D	E	F	G	H	
65° Swing Away	X	X	X						
70° Swing Away	X	X	X						
75° Tapered S/A					X				
90° Swing Away		X	X						
Manual ELR S/A	X	X	X	X					
Power ELR S/A		X							
Fixed Cntrmnt						X			
Power Cntrmnt						X	X	X	

14. ACCESSORIES

WHEELCHAIR TRAY TABLE

0	Swing Away Tray Table 16"	\$311
0	Swing Away Tray Table 17"	\$311
0	Swing Away Tray Table 19"	\$311
0	Swing Away Tray Table 20"	\$311
0	Swing Away Tray Table 22"	\$311

BACKPACK

0	172S1	Black Utility	\$65
0	172A2	Black / Charcoal Kids	\$65

POSITIONING BELT

0	172EJ01	Auto Style Buckle	\$0
0	172EJ02	Belt 2" Aircraft Buckle	\$54
0	172EJ03	Belt 2" Aircraft Buckle Padded	\$111

LIGHTS & INDICATORS

0	LED Lights & Indicators	\$1,871
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(Includes light joystick & ISM. No need to select above)

UNIVERSAL TABLET MOUNT

0	PCMOUNT	Universal Tablet Mount	\$246
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ADDITIONAL COSTS

0	26000-01	Labour 1hr (incl. GST)	\$110
TOTAL COST FOR LABOUR:			\$0
NET COST OF CHAIR ONLY:			\$0
TOTAL COST OF CHAIR & LABOUR:			\$0

Have you remembered to order:-

- JAY cushion or Back - see applicable order forms & Jay Retail Price Book
- Whitmyer - see applicable order form & Whitmyer Short Ordering Guide
- ART - see relevant price list

NOTE: All additional items, incl. Jay, Whitmyer, spare parts etc. should be put on your PO, & will be charged at RRP less discount.

OTHER products also available for purchase include:-

Sunlift Hoists & Slings, Scooters, Power Wheelchairs, Manual Wheelchairs (including Positioning), Guardian, Breezy, Quickie Parts

DISCLAIMER: Not all features & options offered are compatible with all configurations of the wheelchair.

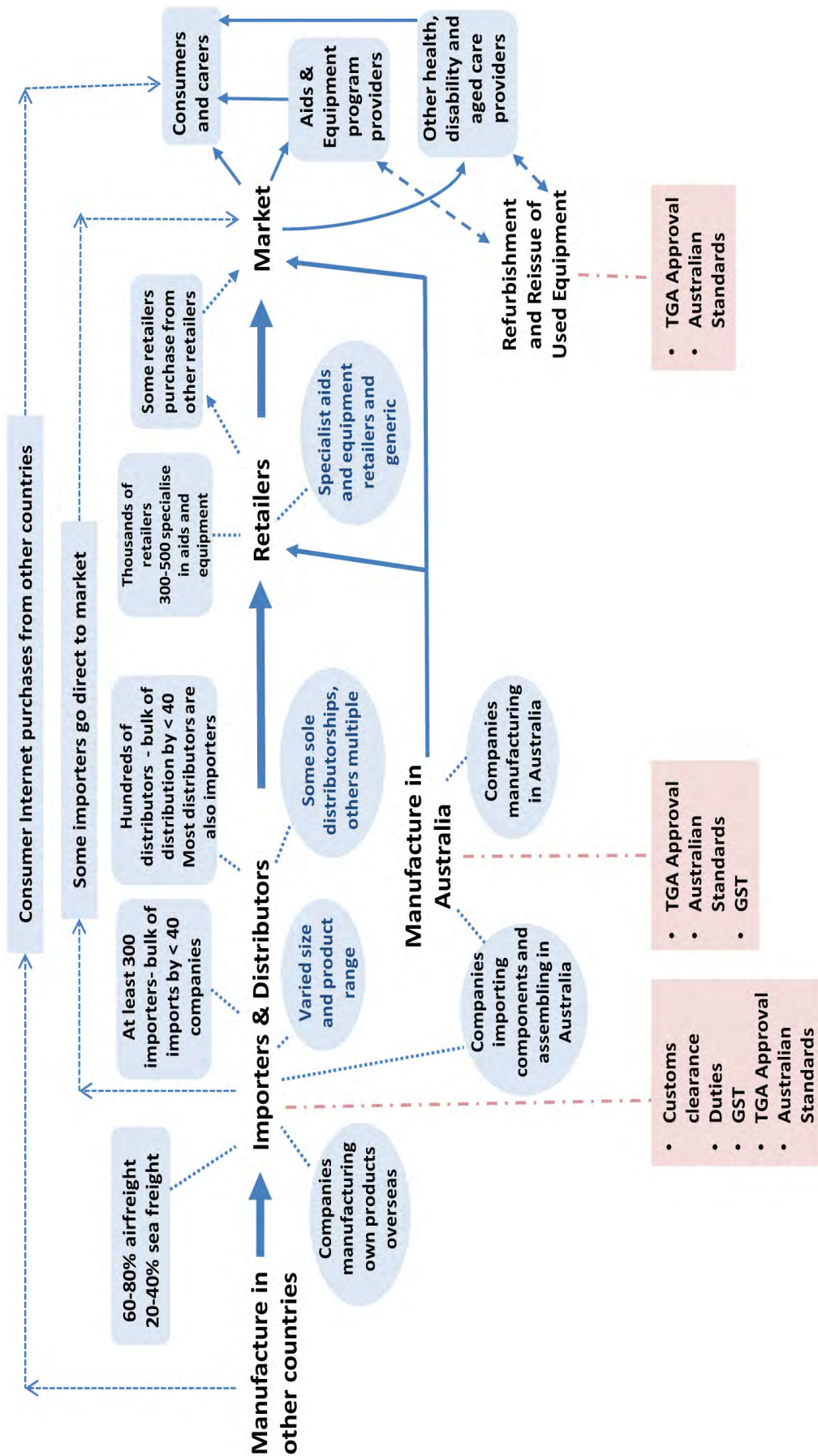


Download a QR reader to your Smartphone to access Quickie QM-710 product page.



Appendix B: Australian AT supply chain

Market and Supply Chain for Aids and Equipment in Australia



Source: Jenny Pearson & Assoc. 2013, pg 48

Appendix C: Details of who does what

This table outlines the details that are presented graphically in Figure 5 in the background paper.

Activity	Consumers	Therapists/Prescribers	Suppliers	Position in AT supply chain
Market analysis: opportunities, needs & gaps	Limited involvement	Limited involvement	Major provider	Precursor to product development, distribution and provision
Research and development	Limited involvement	Some involvement (by those few directly engaged in research)	Major provider	Pre/post product development
Manufacture, sourcing, importing, distribution and compliance testing	No involvement	No involvement	Major provider	Product manufacture and distribution
Inventory, show rooms, spares, expos/conferences, and samples for ILCs and others	No involvement	No involvement	Major provider	Product availability/product information
Information, training & education for therapists	Very limited direct involvement, although therapists learn a lot on the job from consumers	Significant involvement as 'receivers' of information, training and education. ALSO: Some therapists are major providers - teaching, training and mentoring. [Difficult to illustrate this without making the figure much more complex]	Major provider of both general AT issues and product specific training/information	Pre client assessment/engagement
Initial client assessment	Major provider of expertise on their own needs, goals and environment	Major provider	Major provider when independent therapist not involved, and major partner in the process when an independent therapist is involved	Identify consumer's needs/ goals and possible AT solutions
Examine, trial and evaluate possible solutions	Major provider: 'Will it work for me?' 'What can it do/ not do?'	Major provider: advice/assistance with decision-making at broad level regarding appropriate products (including assistance with home/work trials)	Major provider: advice/ assistance regarding detail product knowledge (including delivery, set-up and pick up for home/work trials)	Determine most effective and appropriate AT solution
Funding of purchase	Major provider if self-funding, or partial provider if utilising a government subsidy scheme	Some involvement, particularly as gatekeeper for most government and philanthropic funding, and also helping consumers identify funding sources	Some involvement: providing quotes within the context of the different requirements of different government and philanthropic funding schemes	Securing funding for product provision
Assembly, delivery and installation	Limited involvement	Some involvement: signing off on appropriate delivery and installation; and sometimes deliver smaller items	Major provider, undertaking the assembly, delivery and installation	Deliver AT solution to consumer at home or workplace
Set-up & adjustment	Significant involvement: 'Making sure it fits and works well for me'	Major provider and/or major involvement, sometimes doing set-up and adjustment, important advice and agreement that it is a 'good fit' for the consumer (see supplier box for more details)	Major provider, often undertaking set-up and adjustments – undertaking all work if self-funded, and if government funded tasks vary depending on the AT involved, and the respective skills of the therapists and supplier	Increasing AT usability and safety for each individual consumer
Information/training of consumer & caregivers	Significant involvement: 'Do I know what I need to know about this?'	Major provider, initially and also over time (for some AT, such as for some communication aids, the major cost is in the training)	Major provider of initial information/training on basic use issues, including maintenance schedules (and source of training for most therapists on specific products)	Product use training/information
Review	Significant involvement, including initiating reviews: 'Is this really working for me?' 'Are there better ways of using this?'	Major provider, within most government AT funding schemes there is an expectation that the prescribing therapist will undertake a review with the consumer	Major provider, especially when consumer self-funds or there is not a therapist involved, and/or the consumer contacts the supplier for assistance. Some retailers routinely make contact after delivery to ask if there are any issues/problems.	Post delivery
Warranties, repairs & maintenance	Significant involvement, especially in initiating need for activity	Some involvement, particularly in referring consumers to supplier to get necessary work done, and assisting consumers in sourcing the funding for the work	Major provider, looking after warranties, repairs and maintenance	Post delivery

atsa

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