

Where data gives you dignity

HSC Technology is a hardware and software company for the health and aged care industry. It is helping to shift the industry from reactive to proactive care, improving operational efficiencies of the sector. HSC has recently restructured with new management and moved away from a direct-to-consumer focus towards a direct-to-business approach, enabling larger and faster growth opportunities. As at 31 March 2021, HSC Technology has a 0.38% market penetration of the potential aged care market in Australia. We see the company's market penetration expanding to 4% by the end of CY25, with medium-term revenue growth of 50-70% pa.

Well positioned for industry's change

We see revenue growth fuelled by increased structural demand for technological assistance in aged care. Contributing factors include (1) demographics (an ageing population); (2) March 2021 Royal Commission recommendations for a greater push for home care (enabling independent living for individuals with a higher quality of service) and moving from 'spot checks' to 'continuous monitoring'; (3) global digitisation with adoption of new products and replacement cycle from the imminent 3G network shutdown; (4) limited availability of trained staff in the aged care industry that will benefit from greater monitoring.

Competitive advantages in software offering

While hardware sales are the cash generator of the business, the software side provides the value-add. HSC Technology's offering gives it a wide moat because: (1) it is an end-to-end solution for the end user; (2) it provides an emergency response which its peers do not; (3) it has an exclusive licence over the CSIRO's algorithm to learn and establish an individual's pattern and routine – this algo aids in proactive care and supports the outcomes of the Royal Commission; (4) it is more reliable given it runs on ethernet and GSM; (5) the HSC hardware is Australian certified; and (6) HSC Technology's first-mover advantage with many key customers entrenches it with a sticky customer.

Cash flow supported by hardware sales

Hardware sales generate cash flow ahead of annuity earnings stream from subscriptions. With a current cash balance of \$3.5m, we expect HSC Technology to be cash flow positive over CY22.

Valuation suggests strong potential upside

Our base-case 12-month forward discounted cash flow valuation is \$0.052, implying 250% upside from the current share price. This assumes a further 16% dilution in issued shares from options and performance rights.

HSC TECHNOLOGY GROUP

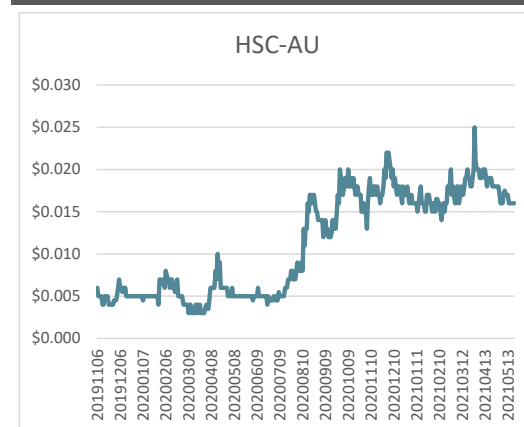
With medical-grade wearables, tracking technology and monitoring devices all linked through Internet of Things (IoT) networks, HSC Technology Group is changing the way healthcare is delivered and creating safer environments. HSC's Assistive Technology suite is designed to enable personalised and proactive care which increases staff productivity, reduces costs and minimises unnecessary adverse medical situations.

<https://www.hsctg.com.au/>

Stock	HSC.ASX
Price	A\$0.015
Market cap	A\$29m
Valuation (per share)	A\$0.052

July 2021	1HCY 21 and 4C
Ongoing	New contract sales with major aged care providers

HSC Share Price (A\$)



Source: FactSet.

Anita Costa

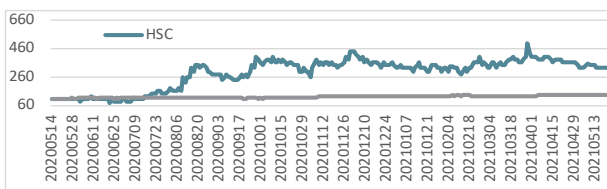
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Financial Forecasts

HSC TECHNOLOGY
Year end 30 June

HSC-AU
MARKET DATA

Price	\$	0.015
DCF Valuation - 12 month	\$	0.048
Total return - 12 month	%	220%
52 week high / low	\$	0.004-0.025
Market capitalisation	\$m	29.3
Shares on issue (ordinary)	m	1,955.7
Options / rights	m	306.0
Shares on issue (diluted)	m	2,261.7

12 month relative performance versus S&P/ASX 200

INVESTMENT FUNDAMENTALS

		CY19A	CY20A	CY21E	CY22E	CY23E
Reported NPAT	\$m	-4.4	-2.4	-0.5	0.5	2.7
Underlying NPAT	\$m	-4.4	-1.6	-0.5	0.5	2.7
Reported EPS (diluted)	¢	-0.5	-0.1	0.0	0.0	0.1
Underlying EPS (diluted)	¢	-0.5	-0.1	0.0	0.0	0.1
...Growth	%	-58%	-83%	-76%	-199%	436%
Underlying PER	x				58.8	11.6
Operating cash flow per share	¢	-0.4	-0.1	0.0	0.0	0.1
Free cash flow per share	¢	-0.3	-0.1	0.0	0.0	0.1
Price to free cash flow per share	x	-1.8	-27.3	-138.5	42.6	10.8
FCF yield	%	-55%	-4%	-1%	2%	9%

Dividend	¢	0.0	0.0	0.0	0.0	0.0
Payout	%	0%	0%	0%	0%	0%
Yield	%	0%	0%	0%	0%	0%
Franking	%	0%	0%	0%	0%	0%

Enterprise value	\$m	5.2	25.7	24.8	24.6	20.8
EV/Sales	x	7.5	24.5	13.5	7.8	3.8
EV/EBITDA	x	-1.4	-27.9	-61.7	45.5	7.7
EV/EBIT	x	-1.2	-16.9	-46.6	53.0	7.8
Price to book (NAV)	x	0.0	0.3	0.6	0.6	0.6
Price to NTA	x	0.0	0.5	0.8	0.8	0.7

KEY RATIOS		CY19A	CY20A	CY21E	CY22E	CY23E
EBITDA margin	%	-534.8	-87.6	-21.9	17.2	50.2
EBIT margin	%	-629.0	-144.3	-29.0	14.7	49.3
NPAT margin	%	-636.5	-226.6	-26.6	16.2	50.3
Underlying ROE	%	nm	nm	nm	7.4	20.2
Underlying ROA	%	nm	nm	nm	5.3	15.4

Net tangible assets per share	¢	0.1	0.3	0.3	0.3	0.6
Book value per share	¢	0.4	0.4	0.4	0.5	0.8
Net debt / (cash)	\$m	-2.2	-4.5	-4.5	-5.9	-12.1
Interest cover (EBIT / net interest)	x	116.3	45.5	-12.0	10.4	52.7
Gearing (net debt / EBITDA)	x	0.6	4.8	11.2	nm	nm
Leverage (net debt / (net debt + equity))	x	-1.8	-5.0	-5.2	-5.8	-9.2

DUPONT ANALYSIS (on Underlying)		CY19A	CY20A	CY21E	CY22E	CY23E
Net Profit Margin	%	-636.5	-226.6	-26.6	16.2	50.3
Asset Turnover	x	0.1	0.2	0.3	0.3	0.3
Return on Assets	%	-73.0	-34.1	-6.7	5.3	15.4
Financial Leverage	x	1.7	1.3	1.3	1.4	1.3
Return on Equity	%	-126.6	-44.6	-9.1	7.4	20.2

KEY PERFORMANCE INDICATORS		CY19A	CY20A	CY21E	CY22E	CY23E
Number of subscribers/users		0	4,700	11,086	22,394	39,705
Market penetration	%	0.00%	0.29%	0.64%	1.20%	1.99%
Average Revenue Per User	\$	\$ -	\$ 52	\$ 54	\$ 55	\$ 57
Software Revenue	\$m	0.0	0.2	0.6	1.2	2.3
Growth	%			143%	108%	83%
Hardware Revenue	\$m	0.0	2.9	4.6	7.5	12.3
Growth	%			61%	64%	63%

QTRLY DATA		1Q20	2Q20	3Q20	4Q20	1Q21
Number of subscribers		2,000	2,700	4,500	4,700	6,300
New subscribers		2,000	700	1,800	200	1,600
Market penetration		0.13%	0.17%	0.28%	0.29%	0.38%

Source: HSC reports, MST Access estimates

PROFIT AND LOSS

		CY19A	CY20A	CY21E	CY22E	CY23E
Revenue	\$m	1.1	3.2	5.4	8.9	14.7
Gross Revenue	\$m	0.7	1.1	1.8	3.1	5.4
Operating Expenses	\$m	-4.4	-2.0	-2.2	-2.6	-2.7
EBITDA	\$m	-3.7	-0.9	-0.4	0.5	2.7
Depreciation & amortisation	\$m	-0.7	-0.6	-0.1	-0.1	0.0
EBIT	\$m	-4.3	-1.5	-0.5	0.5	2.7
Net interest	\$m	0.0	0.0	0.0	0.0	0.1
Non-operating income	\$m	0.0	-0.8	0.0	0.0	0.0
Tax expense	\$m	0.0	0.0	0.0	0.0	0.0
Reported NPAT	\$m	-4.4	-2.4	-0.5	0.5	2.7
Adjustments to underlying	\$m	0.0	0.8	0.0	0.0	0.0
Underlying NPAT	\$m	-4.4	-1.6	-0.5	0.5	2.7

Basic shares on issue	m	1,478.7	1,886.7	1,955.7	2,031.7	2,195.7
Weighted average diluted shares	m	814.8	1,670.3	2,161.7	2,271.7	2,266.7

GROWTH PROFILE

		CY19A	CY20A	CY21E	CY22E	CY23E
Revenue	%	626.7	178.8	69.3	66.2	64.5
EBITDA	%	-12.9	-75.0	-56.3	-234.4	402.8
EBIT	%	-3.5	-65.0	-64.9	-187.1	475.9
Underlying NPAT	%	-2.7	-64.6	-68.5	-204.2	435.3
Underlying EPS	%	-57.8	-82.7	-75.7	-199.1	436.5
DPS	%	n/a	n/a	n/a	n/a	n/a

BALANCE SHEET

		CY19A	CY20A	CY21E	CY22E	CY23E
Cash	\$m	2.7	4.5	4.5	5.9	12.1
Receivables	\$m	0.9	0.2	0.3	0.5	0.9
Other	\$m	0.7	2.0	2.2	3.1	4.5
Current	\$m	4.3	6.7	7.0	9.5	17.6
Property, plant & equip	\$m	0.4	0.2	0.1	0.1	0.1
Goodwill and intangibles	\$m	1.4	0.1	0.1	0.0	0.0
Other	\$m	0.0	0.0	0.0	0.0	0.0
Non current	\$m	1.8	0.3	0.2	0.1	0.1
Total assets	\$m	6.0	7.0	7.2	9.7	17.7
Payables	\$m	1.4	1.1	1.3	2.2	3.7
Borrowings	\$m	0.5	0.0	0.0	0.0	0.0
Other	\$m	0.6	0.5	0.5	0.5	0.5
Total liabilities	\$m	2.5	1.7	1.9	2.8	4.2
Net assets	\$m	3.5	5.4	5.4	6.9	13.4

Equity	\$m	11.9	16.0	16.3	16.9	20.0
Retained earnings	\$m	-8.4	-10.6	-10.9	-10.0	-6.5
Shareholder's equity	\$m	3.5	5.4	5.4	6.9	13.4

CASH FLOW

		CY19A	CY20A	CY21E	CY22E	CY23E
Net Income (Cashflow)	\$m	-4.3	-1.5	-0.5	0.5	2.7
Depreciation & Amortization	\$m	0.7	0.6	0.1	0.1	0.0
Change in Net Operating Assets	\$m	-0.1	0.6	0.1	0.2	0.4
Other Non-Cash Items, Total	\$m	0.3	-0.9	0.0	0.0	0.1
Operating cash flow	\$m	-3.4	-1.2	-0.2	0.8	3.1
Capital expenditure	\$m	-1.0	0.0	0.0	0.0	0.0
Acquisitions/divestment/other	\$m	-0.1	0.1	0.0	0.0	0.0
Investing cash flow	\$m	-1.0	0.1	0.0	0.0	0.0
Equity	\$m	3.8	3.1	0.3	0.0	-2.5
Increase / (decrease) in borrowings	\$m	0.5	0.0	0.0	0.0	0.0
Dividend/other	\$m	-0.6	-0.2	0.0	0.6	5.6
Financing cash flow	\$m	3.7	2.8	0.3	0.6	3.1
Net cash flow	\$m	-0.7	1.7	0.0	1.4	6.2
Free cash flow	\$m	-4.4	-1.2	-0.2	0.8	3.1

Investment Thesis: Positioned to Flourish as Aged Care Transforms

HSC Technology is a hardware and software company for the health and aged care industry. It is helping to shift the industry from reactive to proactive care, improving operational efficiencies of the sector. HSC Technology has recently restructured with new management and moved away from a direct-to-consumer focus towards a direct-to-business approach, enabling larger and faster growth opportunities. As at 31 March 2021, HSC has a 0.38% market penetration of the potential aged care market, which we see growing meaningfully on the back of structural changes in the industry and the competitive advantages of its software offering.

Well Positioned for Industry's Change

We see HSC growing its revenue 50-70% pa over the medium term, with its market penetration expanding to 4% by the end-of CY25. This growth will be driven by structural demand for technological assistance in aged care from an ageing population, Royal Commission recommendations for more high-quality home care with continuous monitoring; global digitisation and the 3G network shutdown; and limited trained staff availability in the home care space.

Competitive Advantages in Software Offering

While hardware sales are the cash generator of the business, the value add is through the software side. The software offering has a network effect as more sales leads to improved data through its algorithm. HSC Technology's offering is well positioned given that it is an end-to-end solution; provides a unique emergency response; has an exclusive licence over the CSIRO's algorithm to learn and establish an individual's pattern and routine; runs on ethernet and GSM for reliability; is Australian certified; and has a first-mover advantage.

Cash Flow Supported by Hardware Sales

Hardware sales ensure cash flow generation ahead of annuity earnings stream from subscriptions. With a current cash balance of \$3.5m, we expect HSC Technology to be cash flow positive over CY22.

Valuation

Our base case 12 month forward discounted cash flow valuation is \$0.052, implying 250% potential upside from the current share price. This assumes further 16% dilution in issued shares from options and performance rights. If we assume that there are no additional subscriptions and associated hardware sales from existing subscribers, our DCF valuation falls to \$0.041, implying 180% upside. If we also assume that the churn rate of subscribers and hardware increases from 15% to 30%, our valuation falls to \$0.035, implying 140% upside.

Our valuation when looking at HSC on a disaggregated/sum of the parts with a focus on users, is \$0.051, implying a similar 240% upside. The largest component of value currently comes from the hardware side of the business, while the greatest future value comes from the software side given its ability to scale.

When comparing to listed peers, Intellicare (ICR-AU) is trading on EV/sales of 28x vs HSC Technology at 8x.

Considering the "Rule of 40" when looking at revenue growth and profitability, HSC is sitting above 40% over the coming three years.

There is a strong ESG angle with HSC, with its focus on the 'social' components of society, as it seeks to improve the living standards and quality of life for the elderly and those with disabilities.

Catalysts

- June 2021 – Annual General Meeting
- July 2021- 4Q21 cash flow update
- Ongoing - New contract sales with major aged care providers

Risks

- The Australian aged care and disability industry is supported by government funding. There is a risk that the government cannot fund or chooses not to fund the industry. Alternatively, the government could improve funding specifically towards staffing that could see a slower take up of HSC's products as staff focus on "spot checks" rather than "continuous monitoring".
- Given the company has access to patient data through software, data leaks or compromises on privacy, could be reputationally damaging.
- Associated reputational risk if HSC's products are supplied in a facility with questionable practices.
- Introduction of unknown regulatory change, which impacts the industry and /or product certification.
- Industry digital adoption is slower than expected, which would see HSC's earnings pushed out and/or not eventuate.
- The 3G replacement cycle is pushed out beyond the 2024 deadline, which could see HSC's earnings from this revenue stream pushed out.
- A new or existing company brings to market a superior product, taking market share away from HSC's products.
- A pandemic, that could slow down adoption from the supply and demand side of the equation.
- The company is currently dependent upon manufacturers for their hardware. Supplier issues could have a knock effect to HSC, including shortages of stock, failure of the product and product recall.
- The company currently has a relationship with the CSIRO for the algorithm within their software. This relationship could be terminated, which would require HSC to look for alternative relationships.
- This is a small company, and the business is currently very dependent upon the CEO and key salesperson, Graham Russell. Russell has significant value tied up with the company, owning 7% of the company with an additional 2% in pending performance rights.
- Ongoing share dilution through the issuance of employee performance rights and the vesting of shares to the "First Milestone", which is to the previous shareholders of the company, HomeStay Care Pty Ltd.

Company Profile: Providing Dignity Through Data

HSC Technology is a hardware and software company for the health and aged care industry. The company is helping to shift the industry from reactive to proactive care for those who need it by enabling ‘hospital in the home’ care, allowing elderly people to stay at home longer and ensure their independence, autonomy and safety. This in turn will improve the operational efficiencies within the sector.

HSC Technology sells hardware including non-invasive sensors, wearables and trackers that autonomously collect data, providing compliance and data insights to carers and families and helping to move the industry away from spot checking to continuous monitoring. These sales and installations generate initial cash back to HSC Technology while engaging a sticky customer. The software technology provides an annuity cash stream to the business, and the associated data retrieved from the software monitoring enables HSC Technology to analyse patterns and identify areas for improving the product’s features.

HSC Technology sells into health and aged care providers, which predominately include high-care nursing homes, retirement villages and homes with independent living units, providers that facilitate home care and specialist resellers such as Telstra, Tunstall, Vitacall, and Sapio. HSC Technology primarily focuses on a B2B2C model – the hardware is a wholesale white-label solution for health and aged care providers, who then on sell the product directly to customers.

Overview of HSC’s Three Divisions

HSC presently has three divisions:

1. TALIOUS Software: Data collection platform

TALIOUS Software is the core proprietary platform that collects the data from the sensors, wearables and trackers. Talius sits with Amazon Web Services (AWS) in Sydney. The software aggregates and analyses the data to create insights and action-based plans. Importantly, the technology aids in ensuring regulatory compliance and accountability across systems and workflows.

There are multiple modules:

- **Neur@I** – artificial intelligence (AI) software founded on CSIRO’s Safer Smarter Homes algorithm that analyses the Activities of Daily Living. This algorithm is licensed to HSC with a patent currently pending. In approximately four weeks, the algorithm learns and establishes an individual’s routine and mobility around activities such as meal preparation, mobility, hygiene and grooming, vital signs monitoring and location. The system can then detect anomalies in behaviour patterns, which can enable proactive care measures to avoid or reduce the need for unnecessary hospitalisation. The contract is a six-year licensing agreement with an annual royalty fee, set at 10% of net licence revenue generated from the module, and is subject to a minimum royalty of \$50k p.a. The agreement with CSIRO can be terminated at any time during its term by either party, upon payment of any outstanding fees and without penalty. The technology is exclusive to HSC Technology for Australia, New Zealand and Singapore.
- **Loch** – a feature that collects and aggregates the data.
- **Round@** – the TALIOUS rules engine that sends and directs alerts to appropriate stakeholders.
- **STAMP** – an alert language converter to response centres including Tunstall, Vital Call, Telstra and Sapio. These companies use their existing systems and provide third-party responses including ambulance and carer dispatches under their existing system protocols.
- **Konnect** – sends alerts through mobile apps to care teams to respond to alerts. The feature triages and prioritises calls with management reporting.
- **DASH** – provides customised dashboards of status, alerts, reports and maps showing a facility, village, wing, home or room. The feature provides insights for care plans, workflows and government compliance.

2. HSC Care: Hardware

The hardware hub and sensors feed data into the TALIOUS software platform.

- Care@Home – The central hub enables personal emergency response, voice activation alerts, falls radar technology and sensing of daily living activities. The hardware is supplied by Essence, a global technology company focused on security and healthcare solutions. Essence has been around for over 20 years and has manufactured more than 70 million installed devices. The company is based in Tel Aviv. Essence also supplies other global HSC peers. These include FocusCura in the Netherlands, Medical Guardian in the US, and GetSafe in the US. HSC has the exclusive distribution rights for Australia, New Zealand and Singapore.
- Sleepsense & Smart Turn – In December 2020, HSC signed an exclusive agreement with Canadian company Tochtech for both Sleepsense, a sleep monitoring technology, and Smart Turn, a stove monitoring device. The agreement covers Australia and New Zealand.
- Sleepsense is a non-wearable sleep tracker (about the size of a mobile phone) that goes under the leg or frame of the bed. The technology uses sensors and algorithms to measure BCG waves (ballistic forces generated by the heart) and reports heart and respiration rates, monitors sleep patterns and quality, and issues alerts to carers or nursing staff when a health risk is identified during the individual's sleep. The benefit is that it is unobtrusive and reduces the need for nursing staff to conduct manual checks. The device also provides data reports around the quality of sleep.
- Smart Turn is a sensor that replaces stove knobs, sending alerts when a stove is on and unattended to the caregiver and user through an alarm system.
- CardiacSense – In April 2020, HSC signed an exclusive distribution agreement across Australia and New Zealand with Israeli company CardiacSense for its medical watch. The watch combines medically certified heart arrhythmia detection and vital sign readings including respiratory rate, blood pressure, oxygen saturation and core temperature. The watch has a five-day battery life.
- RTLS (Real Time Location System) location sensors – can be used by residents, carers, and nurses in a facility, village or home. Data is collected by small Bluetooth chips embedded in access control cards, watches, duress alarms and tags. The sensors are sourced from various suppliers.
- uVue – internet protocol television (IPTV). The device delivers telehealth services and provides social engagement and entertainment options. uVue falls under an exclusive license from Stellar Vision and is to be used for the aged care sector only.

3. HSC Home: Hardware for the home

- WeR@Home – this is a smart home cloud-based platform that provides an all-in-one solution combining security, video, energy, safety and home automation to enable customers to manage and live independently.

History of HSC Technology

HomeStay Care was founded in 2016 to meet the need for smarter technology to help the older population stay in their homes longer. The first incarnation of HSC included a platform system operated via an app, which featured:

- a booking system for everyday services like cleaning and gardening
- an online health portal to store personal medical details, linked to wearable devices that identified an individual's routine
- sensors placed in an individual's home to aid in preventative intervention.

Furthermore, the focus early on was on a direct-to-consumer strategy.

With listing in November 2018, through a Texan oil and gas company, Antilles Oil and Gas Limited, new management raised \$4m of capital, but cash struggled to keep up with investments.

In 2019/2020 there was another change in the company’s board and management, after which the former investors were bought out (there are potentially deferred payments due through to August 2023) and fresh capital of \$7m was raised (\$4m in 4Q CY19 and \$3m in 4Q CY20). Given the cash constraints of the company, shares have been issued in lieu of payments to suppliers and employees since late 2018. These share issuances have amounted to 300.7m shares, equivalent to 15% of the current shares outstanding.

In December 2019, current CEO Graham Russell was appointed. Mr Russell was previously the Managing Director of Automation Australia Pty Ltd, the exclusive reseller of Essence products in Asia Pacific. Automation Australia incorporated into HomeStay Care, in exchange for shares, options and performance rights equivalent to 10% of the float at the time, and 7% of current shares outstanding.

In June 2020, the company changed its name from HomeStay Care to HSC Technology Group, signalling a shift in strategy for the company away from B2C and towards B2B in order to create larger and faster growth opportunities. As a result, the addressable market expanded from AU\$0.6bn to AU\$1.35bn. As at 31 March 2021, HSC Technology has penetrated ~0.40% of the potential market for monitoring technology within their aged care target markets.

Furthermore, while HSC Technology is currently focused on the healthcare and aged care industry, its business model and products have the potential to be applied into other industries over the long term, with possible expansion into hospitals, security management, retail or building utilisation.

Exhibit 1 – Current HSC partners and resellers



Source: HSC.

Industry: Older People, at Home Longer, Need New Kinds of Support

Key structural drivers of demand for technological assistance in aged care include:

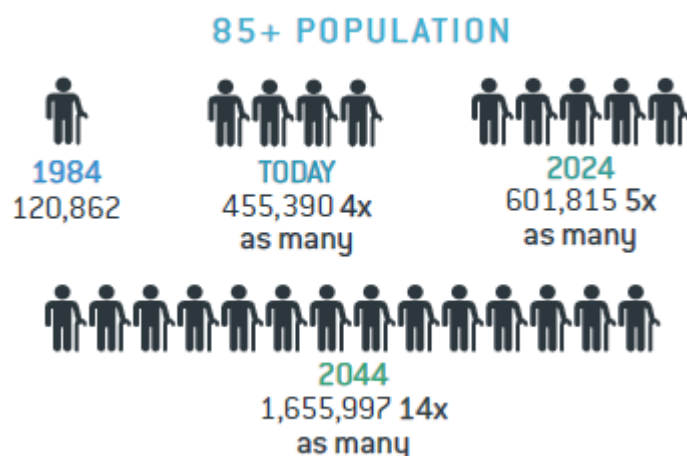
- **demographics** given our ageing population
- the March 2021 **Royal Commission into Aged Care**, which recommended the creation of a reliable, consistent set of data as the ‘source of truth’ to improve understanding and analysis of aged care performance
- **global digitalisation**, along with a specific technology change event in June 2024 when 3G networks will be shut down, placing full reliance on 4G and 5G technology
- **limited availability of trained staffing** in the aged care industry.

Demographics: An Ageing Population with Growing Care Needs

Population over 85 is growing fast

The demographic changes surrounding aged care demand over the long term are well known. Baby boomers, the generation of children born soon after WWII, are now entering aged care, life expectancies continue to increase and the fertility rate has been falling. The Royal Commission into Aged Care highlighted that those over 85 years are projected to increase from 500,000 (2.0% of the population) in 2018 to 1.5m (3.7% of the population) by 2058. This implies a growth rate in the medium term of 7.2% pa, and 5.2% pa in the long term.

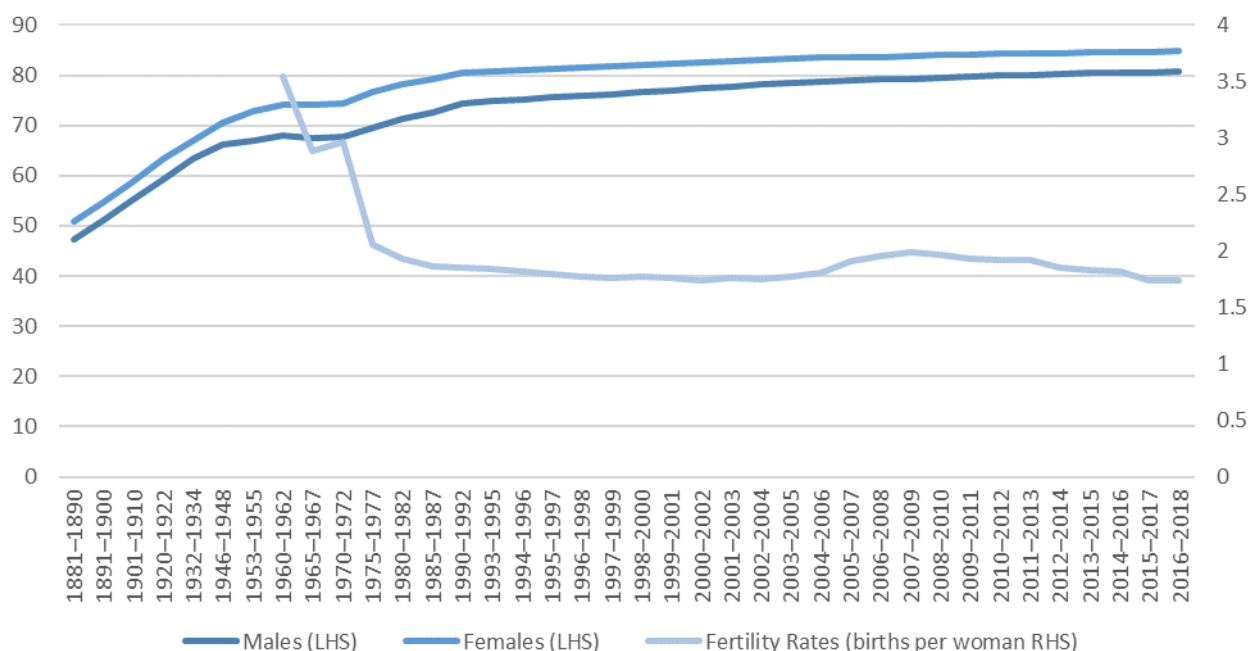
Exhibit 2 – Growth expectations for the 85+ population



Source: HSC/McCrimdale.

According to the Australian Institute of Health and Welfare, Australia has one of the highest life expectancies in the world—82.8 years in 2018 for males and females at birth combined—and ranks seventh out of 37 countries among Organisation for Economic Co-operation and Development (OECD) countries on this measure.

Exhibit 3 – Average life expectancy in years vs fertility rates in Australia



Source: ABS – Australian Bureau of Statistics 2014a. & World Bank

More seniors are opting to remain home, leading to increased safety risks and costs

Demand for aged care is also being impacted by changes in patterns of disease and dependency and changes in societal expectations. Factors include length of stay, increase in care needs, demand for choice, increases in chronic conditions and disabilities as life expectancy also increases, and the desire to remain in private homes.

According to the CSIRO, more than 80% of Australians over 60 years old are opting to remain at home. Chronic conditions can make daily tasks increasingly difficult, putting individuals’ health and safety at risk. In 2018, accidental falls accounted for 1.9% of overall deaths amongst Australians. This was 2.6% for those between 85 and 94 years old and 2.8% for those over 95 years old. According to recent public comments from Australian Government Minister Ken Wyatt, the average fall of an elderly person costs approximately \$106k. This includes ambulance visits, 6-9 week hospital stays, rehabilitation, and costs associated with not being capable of returning home promptly. These costs further place strain on a system that has been long battling funding limitations, as highlighted by the findings of the Royal Commission.

As highlighted by Exhibit 4, the median length of stay for in home care has gradually been increasing across all levels of Home Care Packages (Levels 1-4). Home Care Packages are the government programs which coordinate and subsidise a range of service categories for people who need care at home, such as nursing, cleaning and transport.

Exhibit 4 – Median length of stay (months) in home care, by package entry level

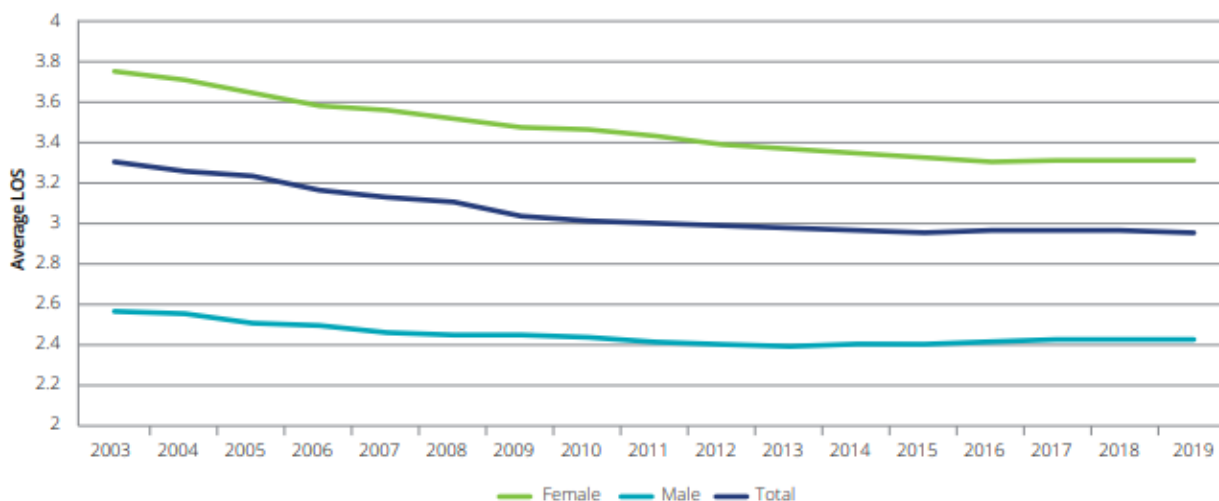
		2015/16	2016/17	2017/18
Level 1	months	16	18	n/a*
Level 2	months	17	21	n/a*
Level 3	months	13	14	18
Level 4	months	15	18	22

Source: Federal Health Department – health.gov.au. Eighth report on the Funding and Financing of the Aged Care Sector – July 2020

* Number of people too low to calculate a median

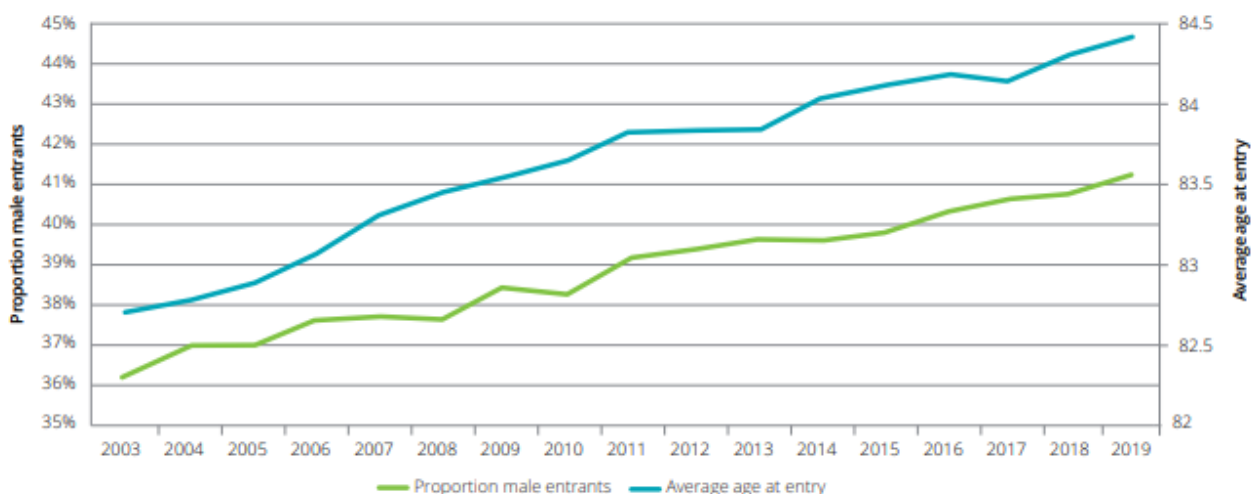
At the same time (though over a longer period from 2003 to 2019), the average length of stay in permanent residential care has stayed reasonably consistent at about 3 years. The average age of entry has increased from 82.7 years old in 2003 to 84.4 years old in 2019, supporting the above table, while there has been a greater proportion of males entering permanent care from 36% of new residents to 41% over the same period. Female residents tend to stay longer (on average 10 months longer than males), as they enter at a lower care level and outlive their male partners.

Exhibit 5 – Average length of stay in residential care, by gender and year of entry from 2003 to 2019



Source: Federal Health Department – health.gov.au. Eighth report on the Funding and Financing of the Aged Care Sector – July 2020.

Exhibit 6 – Changes in age and gender distribution from 2003 to 2019



Source: Federal Health Department – health.gov.au. Eighth report on the Funding and Financing of the Aged Care Sector – July 2020.

Aged Care Crisis – The Royal Commission

The final report of the Royal Commission into Aged Care released in March 2021 concluded that the sector was in crisis and in urgent need of reform. To illustrate, one finding from the report stated that ~16,000 people died waiting for a home care package in 2017-18. According to Australia's Department of Health, as of October 2020, there are 150,000 active home care packages with almost 120,000 still on the wait list.

Given the urgent need for reform and improved care, there are several long-term structural drivers that will drive demand and growth for service and technology providers within aged care, such as HSC Technology.

New aged care program and the role of technology

The Royal Commission focused on home care. A major hallmark of the Royal Commission's push for a new aged care program involves home care, especially given the belief that this is where people want to remain, if possible. In providing home care, a comprehensive suite of care at home services needs to be made available to allow independent living while still providing quality of service for more people. To support this need, subsidies towards home-based care are more likely while incentives for institutionalisation are gradually removed.

Technology and data can also help fill the void being felt in aged care. As concluded by the Commission, without adequate data, longer-term improvements in the quality and safety of care cannot be properly measured or evaluated. As stated in the Royal Commission's final report:

Aged care providers should be actively supported to adopt new technology and to support older people to engage with technology that improves their quality of life, wellbeing and care...Technology can help older people to remain living at home for longer and enhance their quality of life. Through supporting older people and their carers to engage with technology, it may be possible to delay, or in some cases avoid altogether, entry into residential care...

When an Aged Care Assessment Team assessor is assessing a person for care—irrespective of whether it is home care or residential care—consideration should be given to how assistive technology can improve their care and support their quality of life, and if the older person is open to using it or being trained to do so, because many are very willing.

One of the most significant outcomes from the recent recommendations of the Royal Commission into Aged Care and Quality and Safety highlighted how technology is required for the industry to move from casual 'spot-checking' to passive 'continuous monitoring'. This recommendation directly matches one of the needs that the HSC Technology model is aiming to meet.

Three key areas for technology investment (all of which fall under Recommendation 109 of the Royal Commission Report – ICT Architecture and investment in technology and infrastructure) were:

- **transparency:** client relationship management system for care management, case monitoring and reporting systems with standardised systems and tools to improve user experience ease and efficiency
- **care and safety:** pre-certified assistive technologies and smart technologies enabled through IOT/Wifi to support the development and use of mobile care and assessment applications
- **data sharing:** investment in systems that talk to each other and allow for seamless reporting systems, enabling the sharing of data and information between the aged care, health care providers and relevant government agencies. This plays into HSC Technology's product offering given their end-to-end service.

The industry needs funding relief to address the increasing demand for aged care services

To demonstrate the need for funding, according to recent research conducted by accounting and benchmarking firm, StewartBrown, 45% of the 974 aged care facilities they surveyed recorded an operating loss.

New funding arrangements for aged care were a hallmark of the recent 2021 Federal Government Budget. A new \$17.7bn package is to be rolled out over five years, partly in response to the recommendations provided by the Royal Commission:

- \$7.5bn will be directed towards supporting senior Australians who choose to remain in their own home with \$6.5bn allotted to 80,000 new Home Care Packages (40,000 in 2021/22 and 40,000 in 2022/23). This brings the available total of home care packages to ~276k by June 2023.
- \$3.9bn will be allocated towards increasing front line care (care minutes) delivered to residents of aged care providers and respite service providers. The mandate requires 200 minutes per day, which includes 40 minutes with a registered nurse.
- \$942m will be directed towards driving systemic improvements in residential aged care quality and safety.

Even before the May Budget announcement, under the previous policy settings, the Royal Commission findings estimated that Australian Government expenditure on aged care was projected to increase from 0.97% of GDP in 2018–19 to 1.34% in 2049–50. Separate modelling undertaken for the Royal Commission implied that the **Australian Government expenditure on aged care in 2050 is more likely to be 2.75% of GDP in total-- or 1.41% of GDP** higher than it would be if the policy settings that existed before the May budget were maintained. If this eventuates, Australian Government expenditure on aged care as a share of GDP should surpass the current OECD average of 1.5%.

Technology: Industry Catching Up to Technological Advancements

There are two phases for technology in aged care: the replacement cycle and the new adoption of the product.

The replacement cycle: 3G shuts down

Near term, the imminent shut down of the 3G mobile telecommunications network in June 2024 will be a significant change event for the medical response device market. Both Vodafone and Telstra turned off 3G services for the 2100 MHz spectrum in March 2019. While both providers still operate a 3G connection on the 850 MHz range, they have announced that this will only be available until June 2024. As for Optus, even though no announcement has been made, it is likely they will follow suit by also ending 3G services within a year or two after 2024.

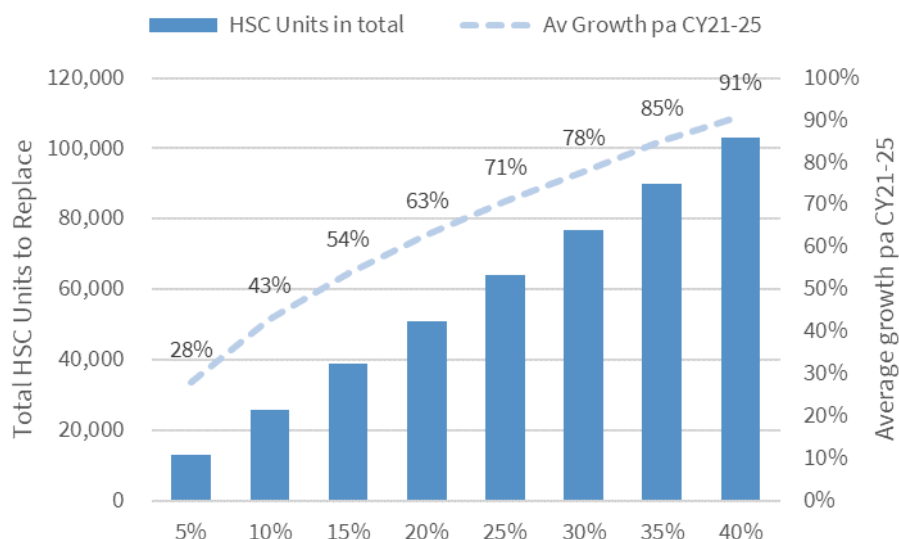
This essentially means that devices that operate solely on 3G will no longer connect to a network. This will affect older 3G-only mobiles along with any IoT device that relies on a 3G SIM card only. M2M Connectivity estimates that there are more than 1m devices/units in total that will be affected nationally. Only changing the SIM will not work as the device will need the 3G chipset replaced with a 4G chipset in order to work.

According to NBN data, it is estimated there are 286,000 IoT monitoring devices that will require replacement over the three-year time frame from now. These devices include alarms, safety pendants and alert systems. The cost for replacement is expected to be approximately \$96m and is likely to be funded through corporates, such as Telstra, in a similar way to how the transition will occur for the mobile phone market.

HSC aims to reach 30-40% of this market requiring replacements. Factors to help HSC reach this goal include their unique end-to-end offering, early inventory management to ensure demand is met and strong relationships with major aged care providers through its B2B distribution channel.

We start with the estimated 286,000 devices which require replacement, and assume that 10% are never replaced, that the replacement cycle extends 18 months past the June 2024 deadline and that the growth is back ended. As shown in Exhibit 7, the additional growth on the number of devices to HSC Technology could range from 28% pa to 91% pa on average over the five years from 2021 to 2025, assuming a range of taking 5% to 40% market share.

Exhibit 7 – Scenario of market share benefit from 3G replacement cycle



Source: MST Access.

The adoption of new products: digitisation to help with costs and scale

Structurally, HSC Technology plays into the global thematic of digitisation. HSC’s product helps deliver aged care assistance at a lower cost and on an increased scale. While the curve ball of COVID-19 only reiterated the need for change and improvement, it also meant that there were more immediate needs to address operationally before technological offerings could be considered or implemented at scale. As a result, the tail to adoption has extended. Two examples of the operational challenges the sector is facing include:

- 1) the long wait list for home care packages (120,000 as at October 2020) with some providers highlighting a 20-25% shortage
- 2) the pressing need to hire more staff to increase care levels.

Aged care providers are slowly catching up to what innovative offerings are available to improve the quality of their own service. As a result, while there are important technological challenges to be addressed, near-term adoption may be slower. At the same time, once the backlog is worked through the system, there should be pent-up demand to support accelerated adoption rates.

Limited Staffing to Benefit from Greater Monitoring

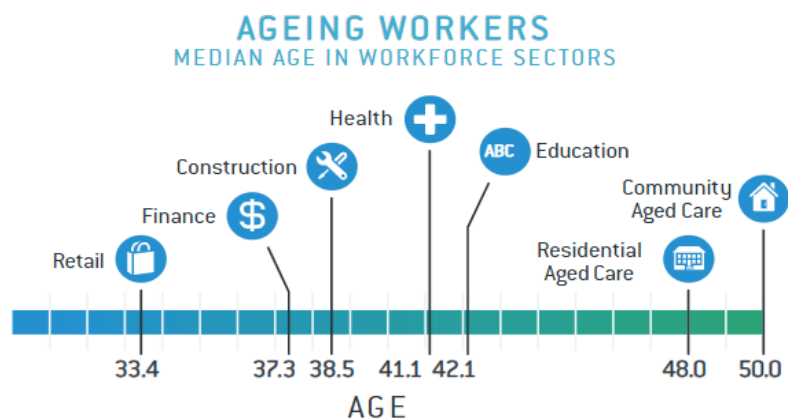
Technology to work alongside staff, not replace them

Technology is not replacing aged care workers. Instead, technology is assisting providers to provide better quality of service for more clients. Historically, the sector has been governed by ‘spot checks’. Having more data and continuous monitoring will aid aged care workers to direct their assistance where it is needed. Technology will deliver higher quality and efficient care virtually, reducing frequent staff travel to visit patients while still providing support through face-to-face and remote user-friendly technologies. This will also improve patient safety and provide a faster response time to any sign of client deterioration through near real-time access to observational data.

The Royal Commission noted that the trend in an ageing population will coincide with a decrease in trained people available to provide crucial aged care services. The current average age of an aged care nurse is 58 years old, with 60-

70% of nurses coming from migrant labour. The Royal Commission also noted that in 2019, there were 4.2 working aged people for every Australian aged 65 or older. This ratio is expected to decrease to 3.1 by 2058. This trend has implications for both financing aged care services, as the tax base from the working aged population decreases in real terms, as well as meeting aged care staffing requirements, with less available skilled labour.

Exhibit 8 – Ageing workers in the aged care sector



Source: HSC/McCrindle Research.

Market Opportunity: A Huge and Growing Addressable Market

HSC management estimates that the total addressable market (hardware and software) in Australia for the aged care and disability sectors will be \$1.35bn by 2025, which includes 2.3m software subscriptions attached to the sensors delivering data. We believe these figures will only grow as noted above with support offered from ageing population growth, new funding brought about in part by the Royal Commission, and the movement towards end-to-end aged care service offerings. Exhibit 9 indicates that the aged care residential services sector is positioned for “quality growth” in its life cycle, as its share of the economy is increasing more quickly than the number of establishments that can service the demand.

Many Opportunities within the Market

Various market components include Personal Emergency Response Systems (PERS), nurse calls, geospatial artificial intelligence and cloud-based telehealth platforms. Across home care, nursing homes and retirement villages, there is also estimated to be ~1.6m customers/beds by 2025, according to management.

Looking ahead, HSC Technology could also penetrate the disability sector, which currently holds about 4.3m customers. A more conservative subset of this market for HSC Technology would be the users of the National Disability Insurance Scheme (NDIS), which includes approximately 400,000 users.

Exhibit 9 – Indicative industry life cycle

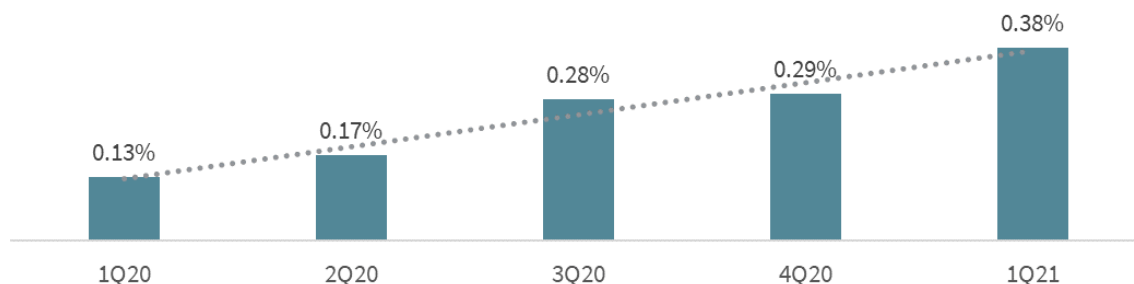


Source: IBISWorld.

A Highly Fragmented Market Structure

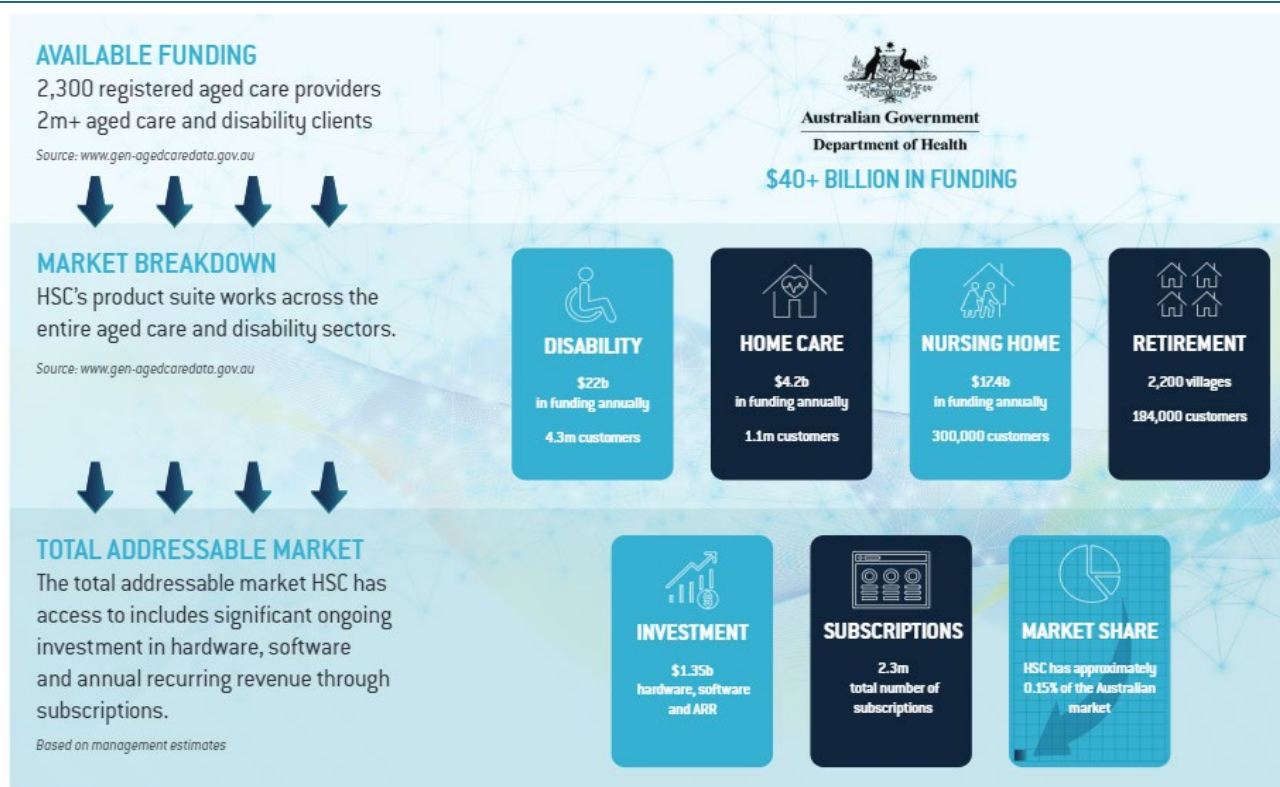
The current market structure is highly fragmented. Looking at the market on a subscription basis, as per above, HSC Technology’s 6,300 subscriptions, as of 31 March 2021, implies a current market penetration of 38bp. This is up from 29bp on the prior quarter and up 13bp on the prior year.

Exhibit 10 – HSC Technology market penetration has been growing steadily



Source: MST Access.

Exhibit 11 – HSC’s market contains multiple growth opportunities benefitting from new government funding



Source: HSC Technology October 2020 presentation.

Competitors: Hardware is the Commodity; Software is the Value Add – HSC Has Compelling Competitive Advantages

The reliability of innovative technologies in aged care services, such as monitoring systems, needs to clear a high bar, given the high duty of care required of aged care providers (the same level as hospital care, especially in high-risk/level 4 Home Care Package cases) and the increased scrutiny around the regulatory landscape. Trust and reliability in these systems takes time to demonstrate and is a reason why HSC Technology differentiates itself by targeting the B2B market. This is achieved through scale and HSC is able to communicate its benefits to business customers as they are better able to appreciate what differentiates HSC's offering.

There are four levels of care associated with aged care. Higher-risk cases at levels 3 and 4 require more direct case management, documentation and extra compliance. Given HSC's product offers the benefit of "continuous monitoring", it provides a solution to this problem. The four-level framework also demonstrates the hurdle that needs to be overcome and the longer time frame (up to 12 months) associated with educating aged care providers about innovative technologies and ways to implement at scale.

See the Appendix for a more detailed analysis of the competitors in this space.

Software Analytics Competitors – HSC Unique in Offering Emergency Response

On the software analytics side, there are three key competitors in the B2B space. No competitor currently offers a complete end-to-end package similar to HSC Technology's software. The key differentiator for HSC compared to all three competitors is its emergency response system.

- **IntelliCare** – ICR-AU: listed in May 2020 and based in Perth with a current enterprise value of ~\$20m; no emergency response capability.
- **Billy** – bought in July 2020 by a private not-for-profit South Australian aged care provider called Enabling Confidence at Home (ECH). Billy targets the retail market, with no emergency response feature.
- **Sofihub** – based in Melbourne and owned privately by CareTeq. Similarly, Sofihub has a retail focus with a notable four-hour back-up battery, but no emergency response system.

Hardware Competitors – HSC Unique in Offering Software Analytics

On the hardware side, there are two primary competitors. Both offer an emergency response system but do not offer software analytics.

- **Tunstall** – based in the UK and only provides hardware for emergency alarms through the use of a central hub and pendant or watch. The device is capable of automated alerts for falls, device removal, destination alerts, permitter alerts and speed alerts. However, the offering does not include extra sensors for routine monitoring or 24/7 data collection.
- **Vitalcare** – similarly to Tunstall, only includes emergency alert hardware through a watch or pendant without further data collection and monitoring. The service operates as a 24-hour medical alarm which can trigger a call to "Rosie" assistant who then directs a call to emergency services if required. Wearable fall detector also optional.

Notably, products and monitoring devices directed towards the consumer end, typically provided by the likes of Garmin, Apple or Google, are not rigorous enough and do not pass the mandated standards of care.

HSC's Competitive Advantages

- **End-to-end product** --HSC is one of the few alternatives that offers an end-to-end product.
- **Emergency response** – HSC's key point of difference for software is its emergency response system.
- **Technology** – In particular, HSC's exclusive license over the CSIRO's algorithm to learn and establish an individual's pattern and routine. This also aids in proactive care and supports the outcomes of the Royal Commission.

- **Reliability** – HSC runs on ethernet and GSM so in the event of a power failure, the system continues to work.
- **Regulatory** –The HSC hardware is Australian certified, which some of its non-hardware focused peers are missing. HSC Technology meets the Australian AS 4607 compliance standard for monitoring and personal response systems including technical performance of equipment, risk management practices, installation procedures and data tracking.
- **First-mover advantage** – Given the stickiness of the customer, and with the average expected lifetime of the product of ~10 years, first-mover advantage is significant. HSC has a national B2B focus to improve market penetration and meet the higher risk needs of aged care providers. HSC’s marketing push follows the hiring of four sales managers across key states at the end of 2020. To date, HSC has been awarded significant contracts with Anglicare Retirement Living, Bolton Clarke and St John’s Home for the Elderly in Singapore, signalling its first-mover advantage.

Business Model and Financials

Business Model: How Does HSC Make Money?

HSC's business model relies on two key strands.

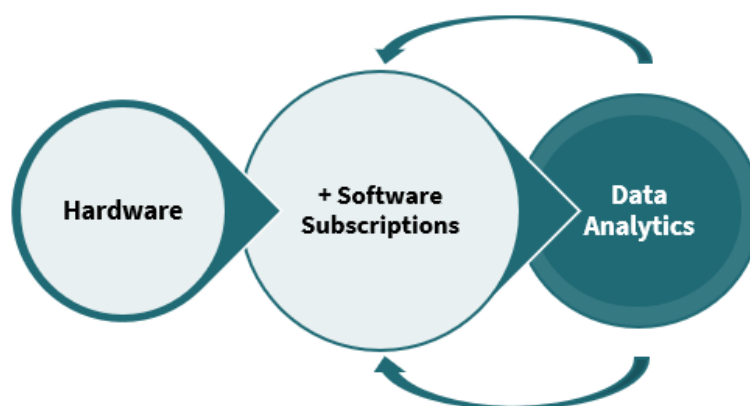
- **Hardware sales** – The hardware entrenches the customer as the software works only on HSC's sensor. This is a one-time sale with an average lifecycle of 7–10 years. Additional sensor sales can be intermittent over the lifecycle with add-on monitoring and subscriptions. Purchasers include aged care providers or resellers. Sales of various hardware products are ~\$55-750 with each grossing around ~20-30%.
- **Software subscriptions** – These provide annual recurring revenue streams. Annual subscription rates are ~\$50-200 per sensor with gross margins sitting at ~70%+.

How Will the Business Grow?

We expect growth will come from hardware sales and add-on subscriptions, which should provide operational leverage.

To support sales growth, there is a network effect brought about by hardware sales driving software adoption. More hardware sales imply more software subscriptions. (Higher-care levels tend to drive an increased number of sensors per client.) More software subscriptions lead to better data monitoring as the algorithm improves upon itself. Better data ultimately drive more subscriptions.

Exhibit 12 – HSC's network effect

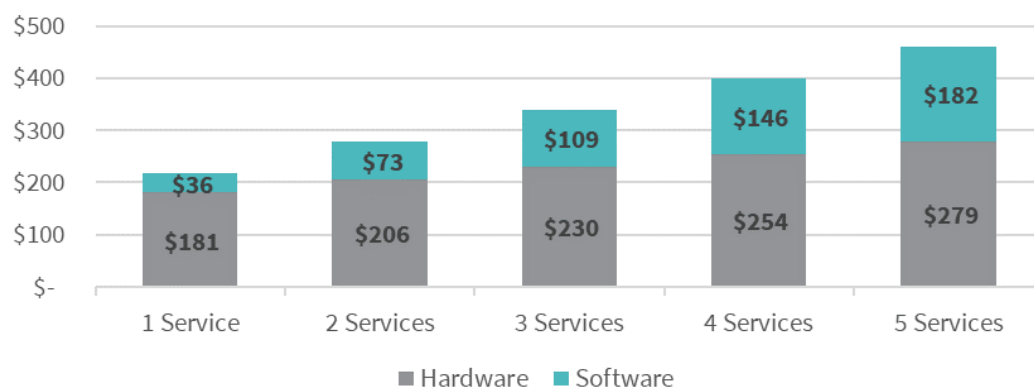


Source: MST Access.

Growth will come from:

- **market growth** – Royal Commission data assumes that the ageing population will grow at 7.2% pa over the medium term, and 5.2% pa in the long term.
- **market penetration** – HSC is focused on improving its distribution network, gaining greater market share through the 3G network roll off. We assume that HSC Technology will take 10% market share of the 3G roll over. This adds an incremental ~40% growth p.a. on top of the natural market growth, and sees HSC Technology get to ~4% market penetration by the end of CY2025. There is a risk this growth is back-ended as providers are slower to adopt the new technology.
- **incremental subscription growth on existing users and increasing annual revenue per subscriber (ARPU)** – HSC Technology currently averages one subscription per sensor. Exhibit 12 highlights the operating leverage possible if this average increases. An increase of four more subscriptions per user from the one \$1/ week subscription, which is equivalent to \$36 net ARPU, can grow net ARPU up to \$182 for the first year alone. This growth, including the sale of additional sensors would see total net revenue increase from ~\$220/yr up to over \$460/yr, a 2.1x increase. This assumes that additional subscriptions come with additional sensor hardware sales.

Exhibit 13 – Benefit of additional subscriptions and sensors for one year of ARPU



Source: MST Access.

Software Provides Incremental Value and Operating Leverage

Taking into consideration hardware and software earnings, it is evident that the incremental value and operating leverage exists on the software side of HSC’s business.

Assuming HSC cannot increase the number of services from the current average of one sensor per client, the software represents about 54% of the total value of ARPU. This assumes that the hardware sale is to a gross reseller at \$609 per device, \$95 per average sensor and subscription rate of \$1 per week increasing at 3% pa.

Exhibit 14 – Earnings post margin assuming only one subscription service and one sensor

Year	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Hardware	\$ 157	\$ 24									
Software		\$ 36	\$ 37	\$ 39	\$ 40	\$ 41	\$ 42	\$ 43	\$ 45	\$ 46	\$ 47
TOTAL TO HSC/yr	\$ 157	\$ 61	\$ 37	\$ 39	\$ 40	\$ 41	\$ 42	\$ 43	\$ 45	\$ 46	\$ 47
DCF	\$ 390										
Hardware	\$ 181	46%									
Software	\$ 209	54%									

Source: MST Access.

Alternatively, if HSC is successful in ramping up their services per sensor from one subscription to five subscriptions, as per the assumptions above, then the software business could contribute 80% of the value. This would see an increase in the value to HSC from \$390 overall under one service to \$1,382 for five services, a 3.5x increase.

Exhibit 15 – Earnings post margin assuming five subscription services and one sensor

Year	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Hardware	\$ 157	\$ 122									
Software		\$ 182	\$ 187	\$ 193	\$ 199	\$ 205	\$ 211	\$ 217	\$ 224	\$ 231	\$ 237
TOTAL TO HSC/yr	\$ 157	\$ 304	\$ 187	\$ 193	\$ 199	\$ 205	\$ 211	\$ 217	\$ 224	\$ 231	\$ 237
DCF	\$ 1,382										
Hardware	\$ 279	20%									
Software	\$ 1,104	80%									

Source: MST Access.

Costs and Investment

Employees the key cost item

Operationally, HSC's greatest portion of costs (60-70%) comes from employees. CEO Graham Russell is key to the sales team given his former role as Essence Managing Director. HSC Technology increased its business development managers to four at the end of CY2021. The business development managers are supported by a national marketing campaign focusing on the 3G replacement cycle. HSC also currently has 3 software developers, which is unlikely to change. We estimate growth in operational costs to be 5% p.a.

CSIRO licensing arrangement

Previously, HSC Technology paid for platform development in house, but moved to an outsourcing model in June 2020 by writing off its previous investment (\$820k) and adopting the CSIRO technology and algorithm through a six-year licensing arrangement. The licence agreement requires HSC to pay an annual royalty fee, set at 10% of net licence revenue generated from the platform, and subject to a minimum royalty of \$50k pa. The licensing arrangement is nearly fully amortised and will run off in CY21.

Inventory a metric to watch

The hardware sales business typically requires a three-month sales cycle. This implies that inventory needs to be accounted for three months ahead of any sale to customers. Given accelerated sales growth, inventory levels have increased accordingly. Inventory accounted for 36% of sales at the end of CY2020 with higher expected sales, but we expect this to settle back towards 25%. This is a metric to watch. Management believes the race for the 3G replacement cycle will most benefit those who have enough stock available to meet demand.

Funding

Cash burn set to slow

Monthly cash burn across 1Q21 was \$0.3m or \$1.2m annualised for the last four quarters. For CY20, cash burn was \$1.1m. Assuming similar rates for CY21 would imply that the current cash balance of \$3.5m will last 2-3 years. According to management, annual cash burn is expected to be closer to \$0.3-0.4m, which implies better rates of cash burn in the coming quarters. Seasonality is typical with billing occurring through the start of the year.

We are assuming that HSC Technology will be cash flow positive in CY22 as the hardware sales support the business.

Equity raises have occurred several times in past few years

HSC Technology has been funded historically by tapping the equity market, with \$4m raised late in 2018, \$4m late in 2019 and another \$3m late in 2020. Existing options being exercised could potentially raise another \$3.1m over CY22/23.

Given funding constraints, share issuance (15% of the current share base) has been a source of funds for payments to suppliers and employees in lieu of cash since the acquisition of HomeStay Care in late 2018.

Further dilution may come through:

- 60m performance rights issued (3% of current shares) with share price hurdles of between \$0.03 and \$0.04. There is a risk that further rights are issued to retain management and the board.
- 100m options issued (5% of current shares) with exercise prices of between \$0.015 and \$0.065.
- 150m 'Milestone Shares' (8% of current shares). These shares are to be issued to the former shareholders of HomeStay Care Pty Ltd based on revenue hurdles. The rights were agreed to in August 2018 in order to maintain solvency. We do assume that these shares are issued based on our revenue assumptions. The hurdles are:
 - 50m shares if cumulative revenue is \$6m within 48 months of listing, being October 2022
 - 50m shares if cumulative revenue is \$9m within 54 months of listing, being March 2023
 - 50m shares if cumulative revenue is \$12m within 60 months of listing, being August 2023.

Looking ahead, we assume an annual 20m of performance rights are issued to employees and the board, equivalent to 1% dilution p.a.

The boards are currently liaising with the ASX with regard to a share consolidation.

Directors, Key Management and ESG

Board of Directors

The current Board is comprised of three people with limited diversity in their backgrounds.

Leylan Neep, Non-Executive Chairman: Mr Neep has a background in finance. He was appointed Chairman in September 2020. He currently owns 0.2% of the share base, 0.4% including pending performance rights.

Graham Russell, CEO: Mr Russell has a background in sensor technology. He was previously Managing Director of Automation Australia Pty Ltd / Essence, HSC's manufacturer. He was appointed CEO in December 2019. Mr Russell currently owns 6.9% of the share base, 8.7% including pending performance rights.

Ramsay Carter, Non-Executive Director: Mr Carter has a background in finance. He was appointed in June 2020 and currently owns 0.4% of the share base, 0.8% including pending performance rights.

Advisory Board

In November 2020, the company brought in an Advisory Board to take advantage of external expertise. This helps bolster the Board metrics. The Advisory Board comprises:

Eugene Lim: Mr Lim has a background in finance. He was previously Managing Director at Credit Suisse Singapore.

Martin Robinson: Mr Robinson has a background in healthcare and finance. He is a founding partner of HEAL Partners, a private equity fund. He also held previous roles with Religare/Fortis Healthcare Group in Singapore and Macquarie Bank in Asian principal investments.

The 'S' in the ESG: Raising Living Standards for Vulnerable People

There is a strong ESG angle with HSC, with its focus on the 'social' components of society, as it seeks to improve the living standards and quality of life for the elderly and those with disabilities. Arguably, HSC contributes to the following United Nations Sustainable Development Goals (SDGs):

- #3. Good health and well-being – ensuring healthy lives and promoting well-being for those requiring greater care
- #8. Decent work and economic growth – through aiding staff involved in care work
- #10. Reduced inequalities – through support for those requiring care
- #11. Sustainable cities and communities – by improved safety of those requiring care

Valuation: Strong Potential Upside on Several Metrics

We have looked at HSC Technology in aggregation through a DCF and in disaggregation/sum of the parts with focus on valuing users. We have taken a more conservative view when it comes to the many assumptions within these valuations. A key point to note for HSC Technology is the broad range in contract metrics feeding into earnings. We have taken an 'average' approach, which may not be completely accurate.

Base-Case DCF Valuation of \$0.052

Our assumptions are below. This gives an equity value of \$0.052, implying a 250% upside from the current share price.

Exhibit 16 – MST Access DCF

DCF	CY21E	CY22E	CY23E	CY24E	CY25E
EBIT	-0.46	0.59	2.77	5.86	9.76
Less: Taxes	0.00	0.00	0.00	0.00	0.00
Post-tax EBIT	-0.46	0.59	2.77	5.86	9.76
Plus: D&A	0.13	0.08	0.05	0.03	0.02
Post-tax cash flow	-0.33	0.67	2.82	5.89	9.78
Less: Capex					
Less: Change in WC	-0.11	-0.22	-0.36	-0.48	-0.57
Free cash flow	-0.44	0.45	2.46	5.41	9.21
Discount coefficient	0.6	1.6	2.6	3.6	4.6
Discounted cash flow	-0.42	0.37	1.84	3.62	5.51
Sum of discount streams	38.1		CAPM		
Terminal growth	3.0%		Risk free rate		2.50%
Future value into perpetuity	206.6		Equity beta		2.0
NPV of terminal value	70.3		Equity risk premium		4.72%
PV of cash flows	108.5		Cost of equity		11.9%
PLUS: Value of tax losses	3.2		Debt		0%
Add: Net Cash	3.5		Equity		100%
Add: Options	3.1		Interest rate		5.0%
Equity value	118.3		Tax rate		30%
Diluted shares	2261.7		WACC		11.9%
Value per share (A\$)	\$ 0.052				
Upside	249%				

Source: MST Access.

Key assumptions of our DCF

- **Churn of 15%:** This may be too conservative, given this is a B2B rather than B2C business, where the hardware may be reused within an aged care facility.
- **Market share of 10%** in the 3Q replacement cycle as opposed to management's view of 30-40%.
- **Average subscription rates of \$1/week**, growing at 3% pa –the pricing growth may be higher given some hardware systems offer greater monitoring.
- **Potentially conservative hardware prices:** Similarly, on averages we may have underestimated the sale price over the range of hardware.

- **Additional subscriptions and sensors.** We have assumed 1 in 10 existing subscribers take on a new subscription and new sensor each year.
- **Terminal year is CY30.**

DCF sensitivity analysis

If we assume that there are no additional subscriptions and associated hardware sales from existing subscribers, our DCF valuation falls to \$0.041, implying 180% upside. If we also assume that the churn rate of subscribers and hardware increases from 15% to 30%, our valuation falls to \$0.035, implying 140% upside.

Applying a sensitivity to the DCF as per the table below. Adjusting the WACC from 11.9% to 8% would see the valuation almost double to \$0.104. Adjusting the terminal growth rate from 3% to 2% would see the valuation fall by 6%.

Exhibit 17 – Applying sensitivity to the DCF

		WACC							
		0.05	8%	9%	10%	11%	12%	13%	14%
Terminal Growth	1%		0.081	0.068	0.059	0.052	0.046	0.041	0.037
	2%		0.090	0.075	0.064	0.055	0.049	0.043	0.039
	3%		0.104	0.084	0.070	0.060	0.052	0.046	0.041
	4%		0.125	0.097	0.079	0.066	0.056	0.049	0.043

Source: MST Access.

Scenario Analysis: Disaggregated Valuation based on Users of \$0.052

Secondly, we have looked at HSC on a disaggregated view, based on users. Not all of HSC Technology's subscribers are equal as their revenue model differs; hence this approach builds up the cash flows through the various users and hardware sales.

In this analysis, our assumptions are as follows:

- **WACC of 11.9%:** We have applied the same WACC from the DCF.
- **Terminal year is CY30.**
- **Existing users valued at \$0.8m:** Pricing of \$1/week per subscription with pricing growth of 3% pa, cost (web hosting) growth of 2% pa over current 6,300 subscribers from 31 March 2021, gives a post-tax operating profit per active user of \$40. Assuming 15% churn gives value per user of \$128. These existing users are lower than the new users as there is greater growth in more subscriptions off the central hub and market penetration.
- **New users valued at \$29.0m:** Assuming similar \$1/week per user with pricing growth of 3% pa, cost (acquisition cost) growth of 5% pa over subscription base growing in line with ageing population and market penetration. Growth in users of 105% in CY22, 80% pa in CY23, trending down to 15% pa by CY30 driven by industry growth from the ageing population and additional subscriptions from existing subscribers. Post tax operating profit per new user is \$30 trending up to \$47 per user. Finally, we assume a terminal growth rate of 4%.
- **Hardware sales valued at \$121.3m:** Assuming market penetration and industry growth, along with one in every ten subscribers taking on a new subscription/hardware unit each year, implies 64% pa growth CY22–25, and~ 10% pa CY25-30. Finally, we assume a terminal growth rate of 3%.
- **Corporate cost drag of -\$41.4m:** This has taken all other costs of the business that have not yet been ascribed to the above users. We assume employee costs grow at 5% pa and all other costs grow at 2-3% pa, with a terminal growth rate of 3%.
- **Add cash of \$3.5m and \$3.1m option funding.**

Our resulting equity valuation is \$116.4m, implying a \$0.051 share price. This suggests 243% potential upside from the current share price.

While the incremental growth as mentioned earlier is in the software side of the business, the greater value is with the hardware. Hardware sales also support the cash generation enabled within the business.

Exhibit 18 – MST Access disaggregated valuation based on users

USER APPROACH			CY21E	CY22E	CY23E	CY24E	CY25E
Existing Users							
Churn	%	15%					
Retention Rate	%		85%	72%	61%	52%	44%
Number of Users	x		6,300	6,300	6,300	6,300	6,300
ARPU	\$	\$	52	\$ 54	\$ 55	\$ 57	\$ 59
Growth pa	%	3%		3%	3%	3%	3%
Revenue	\$m		0.33	0.34	0.35	0.36	0.37
Costs	\$m		-0.07	-0.07	-0.08	-0.08	-0.08
Growth pa	%	2%		2%	2%	2%	2%
Net Revenue Post Tax	\$m		0.25	0.26	0.27	0.28	0.29
Life of Users	yrs	6.7					
Value of Existing Users	\$m		0.8				
Value per User	\$	\$	127				
New Users							
Number of Users	x		11,321	23,232	41,740	68,272	103,092
Number of New Users	x		5,021	11,911	18,508	26,532	34,820
ARPU	\$	3%	\$ 54	\$ 55	\$ 57	\$ 59	\$ 60
Revenue	\$m		0.27	0.66	1.05	1.55	2.10
CAC	\$m		-0.12	-0.12	-0.13	-0.14	-0.14
Net Revenue Post Tax	\$m		0.15	0.53	0.92	1.42	1.96
Growth pa	%	4.0%		252%	73%	54%	38%
WACC	%	11.9%					
Value of New Users	\$m		28.9				
Value of Hardware							
Net Revenue Post Tax	\$m		0.74	1.21	2.04	3.42	5.29
Growth pa	%	3.0%		65%	68%	68%	55%
WACC	%	11.9%					
Value of Hardware	\$m		120.8				
Corporate Cost Drag							
Net Costs Post Tax	\$m		-2.06	-2.39	-2.57	-2.65	-2.75
Growth pa	%	3.0%		16%	7%	3%	3%
WACC	%	11.9%					
Value of Corporate Drag	\$m		- 41.2				
Cash			3.5				
Options			3.1				
Equity Value	\$m		115.9				
Value per Share	\$		0.051				
Upside	%		242%				

Source: MST Access.

Comparable Companies: The ‘Rule of 40’

It is difficult to find comparable listed companies for HSC Technology. Intellicare (ICR-AU) has a ~\$20m mkt cap, trading on EV/sales of 28x vs HSC Technology at 8x.

For HSC Technology, our forecast for the company’s revenue growth and profitability over the next three annual reporting periods (CY21, CY22 & CY23) has the company sitting above 40%. For CY21, while EBITDA margin is negative, strong revenue growth of 69% leads to a net sum of 62% for the two components, above the “Rule of 40”.

Appendix: Competitor Detail

Exhibit 19 – Competitors: Data providers

	HSC / Essence Smart Care	InteliCare	CareTeq (Sofihub)	Billy
Market	Corporate	Corporate & Retail	Retail	Retail
Description	<p>Central hub (power supply with SIM or ethernet connection) + pendant + infrared sensors (typically 5-6).</p> <p>Features:</p> <ul style="list-style-type: none"> • Emergency response • Profiling – home living habits • Rules Engine – for routine behaviours • Vital signs data – blood pressure, heart rate, temperature etc. • Real time location system – understanding where people are 	<p>Central hub + 4 sensors</p> <p>Features:</p> <ul style="list-style-type: none"> • Base package analyses routine behaviours • Premium package includes emergency detectors for higher risk mitigation & safeguards against events such as falls • Additional sensors/room based incident detectors can be purchased 	<p>Central hub + infrared sensors</p> <p>Features:</p> <ul style="list-style-type: none"> • Standard home package includes central hub & 8 sensors. 2 bedroom unit likely requires extra sensors. • Monitors home activity & routine behaviours. • Alerts sent to nominated carers/family with option for patient to initiate call to carer. 	<p>Central hub + 6 sensors</p> <p>Features:</p> <ul style="list-style-type: none"> • Three sensors are motion focused. • Three sensors are multipurpose and more suited to devices that are opened and closed Eg. Fridges/medication storage capsules to check medication is taken.
Hardware Provider	Essence (Israel)	Intelicare (Central Hub) AO Tech (Sensor Specialists)	CareTeq Sofihub (Central Hub) Chinese Manufacturer (Sensors)	Samsung
Emergency Call	<p>Key feature & point of differentiation: Main button on the central hub can trigger an alarm call to a 24/7 call centre.</p> <p>No response in 30 seconds leads to default action of ambulance call.</p> <p>No movement for 30 seconds from the pendant etc. also triggers an alarm.</p>	<p>No direct emergency services feature.</p> <p>Family contact/carer to contact emergency services if required.</p>	<p>No direct emergency services feature.</p> <p>Patient initiates call to the carer.</p>	<p>No direct emergency services feature.</p> <p>Billy is a preventative measure/solution. The device might know of a fall but there is no reactive direct measure to provide action such as emergency services.</p>
Pricing	<p>Example package:</p> <ul style="list-style-type: none"> • Central hub is ~\$400 with the pendant an additional \$100. Sensors involve extra charge. Subscriptions start at \$5/month. 	<p>Example package:</p> <ul style="list-style-type: none"> • Living room, bedroom, bathroom, kitchen, fridge and microwave, front door: ~\$1,299 for hardware + ~\$720/year or \$1,899 upfront (\$120 discount) • Pendant ~\$470 year one, \$144 p.a. onwards • Emergency incident detector 3 rooms: ~\$1,499 year one and ~\$600 p.a. onwards. • Total: ~\$2,149 hardware, ~\$1,440 yearly subscription = \$3,589 or \$3,348 for initial year up front. 	<p>Example package:</p> <ul style="list-style-type: none"> • Hardware ~\$1,199 and ongoing service/SaaS is \$25/month. Software support and data (4G/Wifi) provides 24/7 connectivity. 	<p>Example package:</p> <ul style="list-style-type: none"> • 2 month free trial. Monthly subscription is \$60/month. Removed upfront hardware cost. If you have a Home Care Package, expense is completely covered for all levels. Other coverage provided by Cth short term restorative care programs & NDIS
Network backing	Central hub has a 48 hour battery back up. Sensors are checked operationally every 15 minutes.	Back up chargeable battery lasts 30 mins to 4 hours depending on degree of use & data transmission. If Hub power goes down, alerts are automatically sent to contacts on the App.	Four hour back up battery in the event of power outage.	No back up power. Battery change (hardware specific batteries) required every 9-12 months through App alert. Hub runs via a plugged in modem/wifi of the home with bluetooth connecting sensors. Billy does not operate separately via wireless network.
Distributors/ Industry Partners/ Agency Agreements	Major agreements include: ADT Security Bolton Clarke Ferris Care Awaiting further information	~11 in 3Q21 (increased from 3 in 1Q20)	>12 including: • Harvey Norman, Officeworks, Myer, VideoPro (audio visual specialists), Premier HiFi, CloudStrike - Telstra, ADT Security, Comfort, Discovered, Alter, Comfort Keepers, Guardian Safety Pendants, Monash Health, APM, Stockland, Aidacare • Online resellers: SofiHub, Litmus Lab, The Helping Hub, because • Other partners: NDIS & TAC	>12 including: • Ask ECH, HCF, Ageup Health, careconnect, ComForCare home care, EHM Senior Solutions, Suncare, Community Services, Latrobe, Community Health Service, Western Home Communities
Distribution Channels	B2B - Wholesale providers identify needs of the end user and recommend Essence accordingly. Product is mostly white labelled with providers attaching own branding to Hub unit.	B2B - TAM of 1.1m users. Supports residential care providers. B2C - TAM of 3-4m users. Supports DIY market and available through Government support programs (Home Care Packages) B2B2C - Distributors/agents connect to business/retail who connect to end users.	B2B B2C - emphasis on retail market B2B2C - including the USA, Canada & Mexico	B2B - emphasis on care providers B2C B2B2C
Source	HSC Technology Mngt/Website	Intelicare/Investor Presentation Dec 2020	SofiHub/Investor Presentation Aug 2020	Billy/Website

Source: HSC

Exhibit 20 – Competitors: Emergency hardware only

	HSC / Essence Smart Care	Tunstall	Vitalcare
Market	Corporate	Corporate (Retail can order directly)	Corporate & Retail
Description	<p>Central hub (power supply with SIM or ethernet connection) + pendant + infrared sensors (typically 5-6).</p> <p>Features:</p> <ul style="list-style-type: none"> • Emergency response • Profiling – home living habits • Rules Engine – for routine behaviours • Vital signs data – blood pressure, heart rate, temperature etc. • Real time location system – understanding where people are 	<p>Central hub + pendant/watch (must be worn)</p> <p>Features:</p> <ul style="list-style-type: none"> • Client raises alarm through device • Alarm connects to customer care centre • Care consultant determines if family or friends or emergency services should be contacted • Consultant stays online until contact or help arrives • Devices are capable of automated alerts for falls, device removed, device not worn, destination alerts, perimeter alerts and speed alerts 	<p>Pendant/watch</p> <p>24 hour medical alarm.</p> <p>Alarm triggers call to "Rosie" assistant. 2 or 3 way communication possible.</p> <p>Fall detector possible.</p>
Hardware Provider	Essence (Israel)	Tunstall (UK product)	Hardware (overseas) Software (Vitalcare AU)
Emergency Call	<p>Key feature & point of differentiation: Main button on the central hub can trigger an alarm call to a 24/7 call centre.</p> <p>No response in 30 seconds leads to default action of ambulance call.</p> <p>No movement for 30 seconds from the pendant etc. also triggers an alarm.</p>	Call/alert made to monitoring centre with ability to then alert emergency services	<p>24 hour medical alarm.</p> <p>Alarm triggers call to "Rosie" assistant who can then trigger emergency services.</p> <p>Fall detector will trigger phone call and then emergency services in the event of no response.</p>
Pricing	<p>Example package:</p> <ul style="list-style-type: none"> • Central hub is ~\$400 with the pendant an additional \$100. Sensors involve extra charge. Subscriptions start at \$5/month. 	<p>Guardian/SmartHub/Liberty Central Hubs + standard pendant or monitoring device which client physically wears: \$46.50 per month.</p> <p>Or \$571 to purchase hardware and \$25.50 per month for monitoring.</p> <p>Fall detector an additional one off \$229</p>	<p>\$39/month with \$60 setup fee</p> <p>Or \$479 for 12 months (\$39 saving)</p> <p>No lock in contracts</p>
Network backing	Central hub has a 48 hour battery back up. Sensors are checked operationally every 15 minutes.	72 hour battery backup. Service continues unabated during high call periods or unforeseen technical or environmental outages	Pendant only and battery operated Charging cradle included in package
Distributors/ Industry Partners/ Agency Agreements	<p>Major agreements include:</p> <ul style="list-style-type: none"> ADT Security Bolton Clarke Ferris Care 	Multiple Health Care Providers	<p>Commercial Agents & Distributors:</p> <ul style="list-style-type: none"> Azentro Check In Care Vocera
Distribution Channels	B2B - Wholesale providers identify needs of the end user and recommend Essence accordingly. Product is mostly white labelled with providers attaching own branding to Hub unit.	<p>B2B - Retirement Villages, Local Community Care, Government</p> <p>B2C - Some Retail directly online</p>	<p>B2B - emphasis on hospitals (nurse call tech) and aged care facilities.</p> <p>B2C</p>
Source	HSC Technology Mngt/Website	Tunstall & Website	Vitalcare & Website

Source: HSC.

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