

Singular Health Group Ltd: SHG

# **ASX Announcement**

26 April 2022

## ACTIVITIES REPORT FOR THE QUARTER - 31 MARCH 2022

## **Highlights**

- Additive Engineering's medical 3D printing facility in Melbourne fully operational.
- Successful conclusion of Al-Powered Cranial Implant Design tool, with a collaborative study with OsteoPore Ltd (ASX: OSX) to assess the tool on clinical cases planning.
- Initial sale of Health Academy and Virtual Anatomy education software and increased traffic to Health Literacy Hub resource.
- Formation of a Macau-based JV with an ongoing 3Dicom trial at Macau hospital.
- Targeted sales and marketing campaign in USA and Europe with attendance at neurosurgical conference and the identification of multiple partnership opportunities.
- Received a \$305,055 refund from the R&D Tax Incentive scheme, \$19,000 from the Export Market Development Grant, and \$29,000 in revenue during the March quarter (the Quarter) resulting in a bank balance of \$2.2 Million.

26 April 2022 – Medical technology company Singular Health Group Limited (ASX: SHG) ("Singular" or the "Company") is pleased to provide the following update on the Company's operations and financial position in the attached 4C Quarterly Activities and Cashflow Report for the March 2022 Quarter.

Just over a year ago, Singular Health successfully completed its Initial Public Offering (IPO), raising AUD\$6 million before costs at a share price of \$0.20. As disclosed in the Chairman's letter at the time, this IPO provided the Company with the capital required to execute on its strategy for the vertical integration of the Company's capabilities, in collaboration with key opinion leaders and joint ventures with established businesses, to develop an end-to-end solution for the visualisation, analysis and segmentation of medical images via artificial intelligence, and the production of bespoke solutions through additive manufacturing.

The Quarter marked a full year since listing on the ASX and the team at Singular Health would like to thank all shareholders, past and present, for their support of the Company. Singular Health continues to deliver upon its strategy as evidenced through the GeoVR and Macau joint ventures, investments in additive manufacturing and improvements to the Company's medical image visualisation and segmentation software, 3Dicom.

Numerous key milestones and activities fundamental to the future realisation of the Company's end-to-end solution for patient-specific healthcare have been achieved in the past year and especially in the Quarter. The Company received a class-leading Artificial Intelligence (AI) driven medical image segmentation tool from CSIRO's computing team at Data 61 and has plans to test this on expanded datasets. The Company is also happy to



report on the full commissioning of the Additive Engineering (AE) medical 3D printing facility in Melbourne.

The Quarter saw the completion of a year of foundation building, acquiring, and developing each of the pillars upon which the Scan to Surgery™ process is built and enabling the Company to conduct its first sales and marketing campaigns with visits to the USA, Europe, and Singapore.

Subsequent to the Quarter's end, the Company has been highly focused on regulatory approvals with the appointment of a technical consultant and notified body auditor to develop technical documentation for conformance with the European Union (EU) Medical Device Regulations (MDR), Australia's Therapeutic Goods Administration (TGA) and the US Food and Drug Administration (FDA).

Commercial opportunities identified in the Quarter will be followed up with participation and attendance at a conference organised by the American Association of Neurological Surgeons (AANS) in Philadelphia, USA. AANS is a scientific and educational association focused on advancing the specialty of neurological surgery. The organization has over 8,000 members around the world. It is the organisation that speaks for all of neurosurgery and is dedicated to advancing the specialty of neurosurgery to promote the highest quality of patient care.

We once again thank you for your support and present to you the specific activities report for the Quarter.

#### Commissioning of Additive Engineering Pty Ltd (AE) Medical 3D Printing Facility

One key element to the *production of bespoke solutions through additive manufacturing* is access to a commercial medical grade additive manufacturing facility. The strategic partnership provides the Company the opportunity to lever its 3Dicom software for segmentation, planning, and design of patient-specific implants. Once complete, the facility affords the on-demand opportunity to produce high precision surgical guides including drilling and cutting aids, along with patient-specific implants.

In late March 2021, the Company entered into an agreement to acquire a 25% shareholding of a medical grade 3D printing facility in Melbourne with three titanium printers (see Figure 1) and two polymer-based printers for the manufacture of surgical guides and patient-specific implants.

During the Quarter, less than 12 months after the initial announcement, this facility was successfully commissioned and commenced revenue-generating operations (see Additive Engineering Commissions Medical Manufacturing Facility and Completes Maiden 3D Print of Patient Specific Surgical Guide - ASX Announcement dated 16th March 2022).

Singular Health's 3Dicom software produces outputs that can be used by the 3D printers at the AE facility in Melbourne, and other 3D printing facilities, to manufacture anatomical models, surgical guides, and patient-specific implants.





Figure 1: Three Titanium 3D printers installed at AE Medical Manufacturing facility in Melbourne

### Successful Conclusion of CSIRO Al-Powered Cranial Implant Design Tool

To enhance the Company's product offering and hence the applicability of its 3Dicom software, Singular Health partnered with computer scientists from CSIRO's Data61 on two Kick-Start programs to create two separate Al-powered segmentation algorithms: one for the spine and a second for the skull. Al-powered algorithms are expected to substantially reduce the time taken to segment organs and design patient-specific implants.

During the Quarter, the cranial implant design tool was completed by the collaborative team involving data scientist and developers from CSIRO and Singular Health. The tool has been used to produce cranial implants from CT scan of skulls with head trauma (see Figure 2). Work is underway to integrate this Al-powered auto implant tool into our workflow and allow for ease of export to a 3D printed format.



Figure 2: 3D Printed Cranial Implant designed by SHG Al Model



With the conclusion of the two Kickstart projects with CSIRO, Singular Health's in-house data-scientist are now working on the standardisation of the process to integrate 3<sup>rd</sup> party AI models into the 3Dicom Surgical and 3Dicom R&D software.

This will allow the Company to integrate third party AI models with regulatory clearance into the software and provide them to end-users on a pay-per-use model or other commercial arrangements without the large capital expenditure involved in the development, validation, regulatory approvals, and commercialisation of internally developed AI models.

#### **Health Education Product Update**

During the Quarter, the Health Education product portfolio was expanded and had success with a number of schools signing on to in-school trials and a high school in Perth purchasing a subscription for the Health Academy product.

Lessons and assessments that are aligned with the Western Australian Human Biology curriculum for Year 11 (Unit 1 and Unit 2) and Year 12 (Unit 3 and Unit 4) have been developed and uploaded on the Health Academy for School platform. The courses are offered in combination with a standalone virtual reality application on Meta Quest 2 headset.

The immersive and interactive exploration and manipulation of the fully annotated male anatomical body was recently complemented by the incorporation of an additional labelled female model. In addition, a web-based platform has been created to offer a cross-device exploration and manipulation of the anatomical models and create custom configurations for the virtual reality experience (Figure 3). This is aligned with the Company's commercialisation strategy for the Health Education products outlined in the Prospectus.

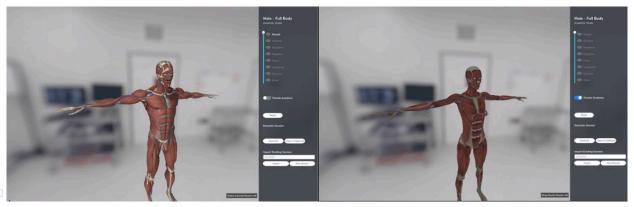


Figure 3: New WebGL Virtual Anatomy Configurator

The Health Academy and Virtual Anatomy products continued to receive interest from various local secondary schools and strong support from both the President and CEO of the Science Teacher Association of Western Australia (STAWA), Annabel Kanakis and John Clark, respectively.

Commenting on the initiative, Albert Raso, Laboratory Manager at Chisholm Catholic College, said: "Chisholm Catholic College's Science Learning Area has recently invested in digital microscopy; PCR technology; and now, in Virtual Reality technology with Virtual Anatomy. This – in conjunction with Singular Health's Health Academy software - offers a whole new interactive way to teach human anatomy and we are excited to be using it in 2022 with the more than 1700 students enrolled across Years 7-12."



Furthermore, during the Quarter, the Company's Health Literacy Hub website, which currently hosts a total of 191 jargon-free medical articles about human anatomy and pathology, has started indexing on Google. As a result, site traffic has increased (Figure 4) and the website is generating initial revenues through Google Advertising. Primary revenue is anticipated through the sale of digital anatomical models, teaching aids and virtual reality models.

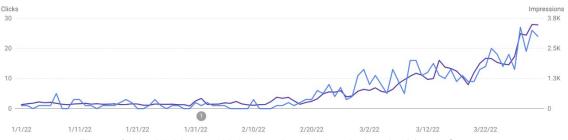


Figure 4: Health Literacy Hub search statistics during the March Quarter

#### Formation of Joint Venture (JV) for Sales and Marketing in Macau

During the Quarter, the Company worked with a group of strategic investors to establish a Sales and Marketing Joint Venture (JV) in Macau. The Company also took the opportunity to translate its suite of 3Dicom software and supporting documentation into Simplified Chinese and launched Chinese hosted versions of the Singular Health websites including singularhealth.cn and 3dicomviewer.cn. This new JV is primarily focused on marketing and sales within the East Asian region, commencing with Macau, Hong Kong, and the People's Republic of China (PRC).



Figure 5: Conde S. Januário Hospital in Macau

The Conde S. Januário Hospital in Macau has agreed to trial the Company's 3Dicom software, and Virtual Surgical Planning (VSP) on the Oculus Quest 2. In order to target the larger mainland market, where it is estimated that the Medical Imaging is forecast to reach US\$10.1B per annum by 2027, the Company is also working to port the VSP onto a Xiaomi VR headset.



#### Initial Sales and Marketing Campaign to USA, Europe, and Singapore

Over the past year, the Company has engaged with companies that manufacture or distribute patient-specific implants. Surgeons have also been targeted. The Company's 3Dicom software and the future versions with the Al models were show-cased.

With the lifting of travel restrictions in February, Singular Health's Chief Operating Officer, James Hill, travelled to the East Coast of Australia to visit brokers, the AE facility in Melbourne, advisory board members and Non-Executive Board member, Andrew Just, before flying to the United States of America.

Spending 3 weeks in the USA, he convened meetings with various patient specific implant companies. In addition, James was a delegate at the Southern Neurological Society Conference in Fort Lauderdale, Florida before flying to Europe where he demonstrated 3Dicom to surgeons in Italy and Switzerland.

Prior to returning to Perth, he spent a week with Singular Health's Consultant Quality Manager, Erik Boelen, in the Netherlands to advance work on the Quality Management System ahead of the upcoming audit.

Singular Health's Chief Executive Officer, Thomas Hanly travelled to Singapore in mid-March, to strengthen the Company's collaborative relationship with Osteopore Ltd by demonstrating the cranial implant tool to their team and other parties.

#### **Business Activities Expenditure**

In accordance with ASX Listing Rule 4.7C.1, with respect to operating activities expenditure, Singular can confirm total direct operating expenditure was \$975,468 for the Quarter, consisting of research and development expenses of \$160,136, advertising and marketing costs of \$59,972, staff costs of \$374,761, lease costs of \$19,892, administration and corporate costs of \$313,428, and GST of \$46,771 and forex costs of \$508. Net cash used in the operating activities was \$622,046 due to cash inflows totalling \$29,181 from revenue and \$324,241 from government grants.



#### Compliance

Pursuant to Listing Rule 4.7C.2, the Company provides the following comparison of its actual group expenditure on the individual items in the "use of funds" statement in its IPO prospectus since the date of its admission to ASX's official list against the estimated expenditure on those items in the "use of funds" statement in the prospectus and an explanation of any material variances.

Use of Funds	Estimate for the two years post ASX admission (as per Prospectus 9 December 2020)	Actual Use to 31 March 2022	% of total
Costs of the Offer	\$505,000	\$343,894	68%
Hardware Purchases	\$700,000	\$253,378	36%
Marketing and IP Certification	\$1,163,319	\$520,487	45%
Staffing Costs	\$1,700,000	\$1,789,087	105%
Research and Development	\$1,465,000	\$635,693*	43%
Working Capital and Corporate Costs	\$700,000	\$1,296,242**	184%
Loan Repayment	\$166,681	\$166,857	100%
TOTAL	\$6,400,000	\$5,005,638	78%

<sup>\*</sup> Variations in the actual use of funds will be inclusive of revenues and other material cash inflows including the R&D tax incentive refund of \$223,169 as announced in the March 2021 Quarterly

### **Corporate Activities**

In accordance with Listing Rule 4.7C.3, the Company advises that payments to related parties of the entity and their associates during the Quarter amounted to \$147,153. Amounts included in 6.1 attached 4C relates to remuneration paid to Directors.

Authorised for release by the Board of Directors.

#### Ends

For further information contact

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<sup>\*\*</sup>Variation in Working Cap and Corporate Costs primarily due to inclusion of additional administrative, compliance and corporate costs incurred by the Group and the accounting policy associated with those costs.



#### About Singular Health

Singular Health Group Limited (ASX:SHG) is a medical technology company that empowers practitioners and patients via personalised surgical planning solutions that drive better health outcomes.

Singular Health has developed a proprietary Volumetric Rendering Platform (VRP) that leverages existing 2D radiological images to generate fully immersive patient-specific 3D/VR models. Although Singular Health's VRP technology is applicable to other sectors in which the visualisation of dynamic data is crucial, with it already being utilised in the mining sector, the Company's core focus is on the medical sector.

Complementing its VRP technology, Singular Health has acquired Virtual Surgical Planning software and a 25% stake in medical-grade 3D printing company Additive Engineering. These investments represent key milestones in Singular Health's efforts to commercialise its 'Scan to Surgery' initiative, a world-first vertically integrated platform that revolutionises the planning and execution of personalised surgical procedures. A successful full-scale commercialisation of this end-to-end personalised surgical planning platform will give Singular Health the capability to penetrate a multi-billion-dollar global market opportunity in the medical visualisation and additive manufacturing spaces.

With Singular Health, practitioners are empowered by having the ability to collaborate with producers of patient-specific medical components in real-time while patients benefit from having access to easily comprehensible and enhanced medical information.

To learn more, please visit: <a href="https://www.singular.health">www.singular.health</a>

#### **About Scan to Surgery**

Scan to Surgery<sup>TM</sup> is a disruptive technology-driven process that revolutionises the planning and execution of surgical procedures, reducing cost and improving patient outcomes. Built on the backbone of MFTP, incorporating 3D/VR scan review with virtual surgical planning software and utilising local additive manufacturing facilities, Scan to Surgery<sup>TM</sup> aims to rapidly deliver patient-specific solutions.

#### **About Health Academy**

Aligned with Singular's vision of Developing Better Health Literacy and Delivering Better Health Outcomes, Health Academy is an online health education platform built for health practitioners, secondary and tertiary educators to deliver interactive content to improve health literacy. Combining an online platform with curriculum-aligned interactive content and quizzes with the Virtual Anatomy module which provides a fully immersive virtual-reality model of human anatomy, Health Academy provides a multi-modal approach to delivering health education to students and patients.

# **Appendix 4C**

# Quarterly cash flow report for entities subject to Listing Rule 4.7B

#### Name of entity

Singular Health Group Limited

ABN

Quarter ended ("current quarter")

58 639 242 765 31 March 2022

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	29	37
1.2	Payments for		
	(a) research and development	(160)	(364)
	(b) product manufacturing and operating costs	-	-
	(c) advertising and marketing	(60)	(219)
	(d) leased assets	(20)	(55)
	(e) staff costs	(375)	(1,122)
	(f) administration and corporate costs	(313)	(627)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	-	5
1.5	Interest and other costs of finance paid	-	(1)
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	324	387
1.8	Other (ATO Payments)	(47)	(47)
1.9	Net cash from / (used in) operating activities	(622)	(2,006)

2. C	ash flows from investing activities		
2.1 Pa	ayments to acquire or for:		
(a	) entities	-	
(b	) businesses	-	
(c	) property, plant and equipment	-	
(d	) investments	-	
(e	) intellectual property	-	
(f)	other non-current assets	-	

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
2.2	Proceeds from disposal of:		
	(a) entities	-	-
	(b) businesses	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) intellectual property	-	-
	(f) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (Joint Venture Payments)	(7)	(7)
2.6	Net cash from / (used in) investing activities	(7)	(10)

3.	Cash flows from financing activities	-	-
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	-	-

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	2,749	4,136
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(622)	(2,006)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(7)	(10)

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	2,120	2,120

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	1,120	1,749
5.2	Call deposits	1,000	1,000
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,120	2,749

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	147
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
Moto: i	f any amounts are shown in items 6.1 or 6.2. your quarterly activity report must include	lo a description of and an

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

7.	Financing facilities  Note: the term "facility' includes all forms of financing arrangements available to the entity.  Add notes as necessary for an understanding of the sources of finance available to the entity.	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-
7.5	Unused financing facilities available at qu	uarter end	-
7.6	Include in the box below a description of each facility above, including the lender, interes rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		itional financing

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(622)
8.2	Cash and cash equivalents at quarter end (item 4.6)	2,120
8.3	Unused finance facilities available at quarter end (item 7.5)	-
8.4	Total available funding (item 8.2 + item 8.3)	2,120
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	3.41
	Note: if the entity has reported positive net operating cash flows in item 1.9, answer item	8.5 as "N/A". Otherwise, a

figure for the estimated quarters of funding available must be included in item 8.5.

8.6 If item 8.5 is less than 2 quarters, please provide answers to the following questions:

Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer: N/A

8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: N/A

8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: N/A

Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.

#### **Compliance statement**

- This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

	26 April 2022
Date:	
	The Board of Directors
Authorised by:	(Name of body or officer authorising release – see note 4)

#### Notes

- This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the
  entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An
  entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is
  encouraged to do so.
- 2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 107: Statement of Cash Flows apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
- Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
- 4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
- 5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.