

Sensera Ltd.

Working with Harvard and VC-backed MedTech's on newly emerging Organ-on-a-Chip technology

Sensera (ASX:SEI) announced a collaboration with Harvard University's Wyss Institute for Biologically Inspired Engineering on the development of so-called Organ-on-a-Chip (OOC) technology. The collaboration has already resulted in four new development customers for SEI, through Harvard, most of which are backed by Venture Capital funds. Considering the amount of capital currently being invested in medical sensor technology, we believe this relatively new market can potentially start to generate very substantial revenues for SEI in the next few years.

What is an Organ-on-a-Chip?

An OOC is a multi-channel 3-D microfluidic cell culture chip that simulates the activities, mechanics and physiological response of entire organs and organ systems. To date, researchers and MedTech companies have simulated the human heart, lung, kidney, artery, bone, cartilage and skin through early OOC applications.

Not only can OOC's take over certain tasks inside a human body, the longer-term potential is for OOC's to shorten the time of new drug development and FDA approval, given that part of the traditional testing on animals can potentially be done with OOC's rather than animals.

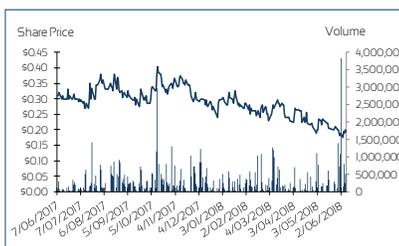
However, SEI is not currently focusing on that aspect of the technology, but rather is working with venture-backed MedTech companies in the United States to bring to market OOC applications in the next few years.

Already revenue-generating, but the upside is in volume production

SEI is already generating development revenues from four OOC collaborations in this field, but the financial upside is in volume production. As with other MedTech customers, SEI's sales strategy in MedTech is aimed at the design-in of its technology into new products, resulting in future revenues once the end-products are starting to be mass-produced by the company's customers.

A key aspect in bringing OOC's to market will be SEI's customers being able to develop the required product features for specific applications. In other words, even though SEI's chips currently already function as they should, SEI's customers will still need to get the overall end-product to work as required. The company is working with Harvard University and the OOC customers towards this end goal.

Number of shares (m)	159.8
Number of shares FD (m)	167.3
Market capitalisation (A\$ m)	31.2
Free Float (%)	100%
12 month high/low A\$	0.43 - 0.175
Average daily volume (k)	323



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Flash Note

Sensera Limited

(ASX:SEI)

Technology Hardware & Equipment

Australia

Risk: High

Sensera Limited (ASX:SEI) designs, develops and manufactures Micro Devices (MEMS) for Medical and Industrial applications. Through recently acquired Nanotron, the company provides tracking solutions for the Agriculture, Mining and Healthcare verticals. The company's MEMS business is based in Boston (USA), while Nanotron is based in Germany.

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BUY

Current price: A\$ 0.195

Price target: A\$ 0.50

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OOC market to go from non-existent in 2015 to US\$ 170M in five years

The OOC market essentially didn't exist three years ago. However, Allied Market Research anticipates that this market will grow to around US\$ 170M by 2023. In our view, this is fairly conservative given the potential application areas and cost savings that may be achieved with OOC's, e.g. in drug discovery.

Low-hanging fruit and longer-term potential

Key drivers of the OOC market include the application of OOC-enabled devices in the Healthcare industry and the increasing demand for OOC's in drug discovery.

We believe the immediate opportunity for SEI is in OOC-enabled devices through its current OOC development customers. Longer term, OOC's hold the potential to revolutionize drug discovery. Worldwide pharmaceutical R&D totaled \$141 billion in 2015, a large part of which is related to performing animal testing. We see substantial potential for cost savings by partly replacing animal testing by testing using OOC's.

Boston-based Emulate, which is actually a spin out of Harvard's Wyss Institute, is developing OOC's to help model and predict effects of (new) drugs. The company has raised US\$ 59M (~A\$ 79M) in four years. Early adopters, or testers, of its technology include Johnson & Johnson, Merck and Seres Therapeutics.

Other emerging OOC players include Netherlands-based Mimetas (raised US\$ 29M to date) and CN Bio Innovations.

Sales of disposable units makes revenues recurrent in nature

SEI's OOC sensor modules range in price from a few hundred to a few thousand US dollars per unit. Once used, most OOC's are disposed off, as opposed to other types of MEMS used in medical devices, e.g. implants. This recurrent element of OCC sales is highly attractive for SEI and underlines the future revenue potential for the company.

However, commercial success for SEI will to a large extent depend on its customers being able to develop and market a commercially viable product.

Reiterate our BUY rating and A\$ 0.50 price target

SEI reaffirmed its revenue guidance for FY19, i.e. 60% y-o-y growth compared to the projected US\$ 6.25M to US\$ 7.25M for FY18. As discussed in our previous update following the 3Q18 (March quarter) results, we believe the company is on track to achieve our US\$ 11.2M revenue estimate for FY19.

We believe the OOC market, while small today, can contribute substantial revenues to SEI's top line within a few years, i.e. several millions of dollars annually. Moreover, longer term growth is expected to be above 60% in the next five years. Given SEI's strong position in this market through its collaboration with Harvard, we expect the company may be able to capture substantial market share in OOC sensors during this period.

For these reasons, we reiterate our Buy rating and A\$ 0.50 price target for SEI.

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