



DESTINATION STARTUP

Majelco Medical

One-Sentence Summary of What You Do: Majelco Medical, Inc. is a seed-stage company that is developing a proprietary, disposable device to measure surgical blood loss accurately and in real-time, enabling improved patient outcomes and decreased healthcare costs for approximately 10 million surgeries every year in the US alone.

Affiliated Institution: University of Utah

Have you formed a company yet? Yes

Funding/Financing: Grant Funding, Direct/Indirect University Support, Angel Funding (including Self or Friends/Family)

Please describe your company and the problem you are trying to solve: There are ~46M surgeries per year in the US alone. In over 10M of those surgeries, clinicians must rely on visual estimates, rather than actual measurements, to determine the patient's blood loss. These visual surgical blood loss estimates are off, on average, by 40%. Unfortunately, these inaccurate estimates are then used to determine the amount of IV fluid the patient needs and whether the patient needs a blood transfusion. The result is excess IV fluid infusions and unnecessary blood transfusions that cause post-surgical patient complications, which then increase patient suffering and cost hospitals billions of dollars a year in the US alone. Clinicians want the data they need, when they need it - so they won't have to guess. We are developing a smart surgical suction canister system that will provide clinicians with real-time, accurate, and continuous surgical blood loss measurements, eliminating the guesswork and allowing for data-driven fluid management decisions. Studies have shown that surgical patients receiving data-driven fluid management have markedly better outcomes at a substantially lower cost, \$1,000 to \$19,000 per surgery depending on the circumstances. Our inexpensive, easy-to-use system will be comprised of a proprietary optical probe, canister, and, initially, a tablet. The canister and probe will be disposable, which will allow our system to integrate smoothly into the current OR workflow. We have completed a first-generation prototype and are now developing a second-generation one. Our optical technology work has already resulted in four patents, and we continue to develop more intellectual property.

What is/was your go-to-market strategy? Our initial target market is the ~10M US surgeries per year where visual estimation is currently used to determine surgical blood loss. We call these surgeries moderate blood loss surgeries. Invasive monitoring is used for the high blood loss procedures (~14M), and a blood loss measuring device is not needed for the low blood loss ones (~22M). We anticipate that our device will have an average selling price of \$100/unit, which gives us a total addressable US market of \$1B. Globally, the market size is over \$4B. Our direct customer



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is a hospital committee called a value analysis committee. The best way to reach these committees is to work through their influencers. Their primary influencers are anesthesiologists, surgeons, and patient blood management teams. These influencers are often part of the committees. We are already working with primary influencers and will ramp up this effort once our second-generation prototype is available to use in “show-n-tell” discussions. Our only real-time competitor is the current standard of care, visual estimation. Gauss Surgical offers two Apple apps that focus on sponge counting and hemorrhage detection in labor and delivery. Their technology determines the amount of blood a woman lost during delivery by analyzing photos that surgical staff have taken and uploaded to the Gauss website. Compared to both of these, our technology is not only the most accurate, it’s also the easiest to use, it integrates smoothly into the current OR workflow, and it provides the most continuous, real-time data.

How will/do you generate revenue? Our five-year financial models have been built using assumptions and estimates common in financial models, including those around market characteristics and projections, technical development strategy and timeline, customer acquisition strategy and conversion rates, manufacturing strategy and ramp-up speed, cost of goods sold, operational expenses, and revenue streams and projections. The assumptions and estimates are updated regularly and used to build revised models. Discussions with primary influencers have already resulted in invitations to test and develop our device in the operating rooms of prominent hospitals. These Development Partner Hospitals will be the source of our first revenue. Building strong relationships with good-fit contract manufacturers, medical product distributors, and then with specialty medical manufacturers will enable us to achieve swift market penetration. Our financials project that we will start to realize revenue in 2022 and that our 2024 revenue will be ~\$11.7M. In terms of an exit strategy, we will work to position ourselves for a favorable acquisition by creating market traction, establishing our technology as the new standard of care, and reaching critical mass. As part of this strategy, we have identified companies that we believe could be potential buyers. Two such companies have already reached out to talk with us about our device.

How will this showcase benefit your company or technology? Our main goal with the showcase would be to expand our investor network. We anticipate raising a \$750,000 seed fund within the next 12-14 months and want to ensure that we get a very strong investor-Majelco fit. Depending on the specific interests and needs of the investor, a family office fund, micro-VC fund, VC fund, or even corporate capital could all be a good fit. A secondary goal would be to meet potential principal investigators for an SBIR grant as well as engineering resources with expertise in both optics and fluid blood products.



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Who are the members of your team and why is this the right team to get the job done?

- We are a very experienced team of entrepreneurs, anesthesiologists, scientists, and business experts. Collectively, the management team and board members have 170+ years of experience in anesthesiology, healthcare, science, and business, including in 30 startups.
- Dr. Annette MacIntyre, our founder and inventor and now the Chief Medical Officer and Board Chair, was a board-certified anesthesiologist for almost 30 years. Her passion for improving patient care led her to come up with the idea for our device.
- Beth Hoburg, MS, MBA is our CEO and a Board Member. She started her career as a chemist and has 25+ years of experience in the healthcare, science, and engineering sectors spanning product development, information technology, strategic change, management consulting, and operations.
- Timmy Chou, our CFO and a Board Member, has 25+ years of experience as an entrepreneur, investor, executive, and consultant. He brings seasoned finance and business development expertise to the team. The last 20 years of his career have focused on technology and life science startups.
- In addition to being the founder of at least one startup, our three non-management board members are (1) Dr. Derek Sakata, an inventor and 20+ year anesthesiologist with two FDA approvals; (2) Tyler McCabe, a co-inventor and 25+ year executive and PhD scientist with 11 FDA approvals; and (3) Dick Clayton, a 30+ year executive, attorney, and investor.
- We also have a strong team of additional advisors with expertise in areas such as intellectual property, quality management systems, corporate governance, university spin-outs, operations, and software development.