

Seraph.

CASE STUDY

SERAPH AT A PRIVATE EQUITY-OWNED
MEDICAL DEVICE MANUFACTURER

4350 Executive Dr. Suite 310
San Diego, California 92121
Email: apowch@seraph.com



THE SITUATION

Seraph was engaged by a private equity owned Tier 1 medical device manufacturer in the final stages of preparation for a sale. The client asked Seraph to evaluate the Manufacturing Footprint and develop optimization possibilities, with an initial hypothesis that two plants could be closed. It was clear that the manufacturing footprint was suboptimal, asset utilization was low, and ongoing infrastructure costs were high.

Seraph was asked to examine the operational footprint, understand and quantify asset utilization across the network, and to make recommendations on improvements. We were also asked to help evaluate establishment of a low-cost country strategy for a future manufacturing footprint. We agreed with the client that two plants would need to be removed from the manufacturing network, and these plants were targeted for a deep dive based on clear data.

MANUFACTURING FOOTPRINT WAS SUBOPTIMAL, ASSET UTILIZATION WAS LOW, AND ONGOING INFRASTRUCTURE COSTS WERE HIGH.



THE APPROACH

In order to collect data while minimizing disruption of supply to customers and avoiding unrest within the workforce, a cover story was required. A cover story is commonly used to allow required data to be collected without divulging the closure analysis. Specific members of the client's organization were read into the program and provided full information access. This expedites the timing and provides a sanity check from within the operating business.

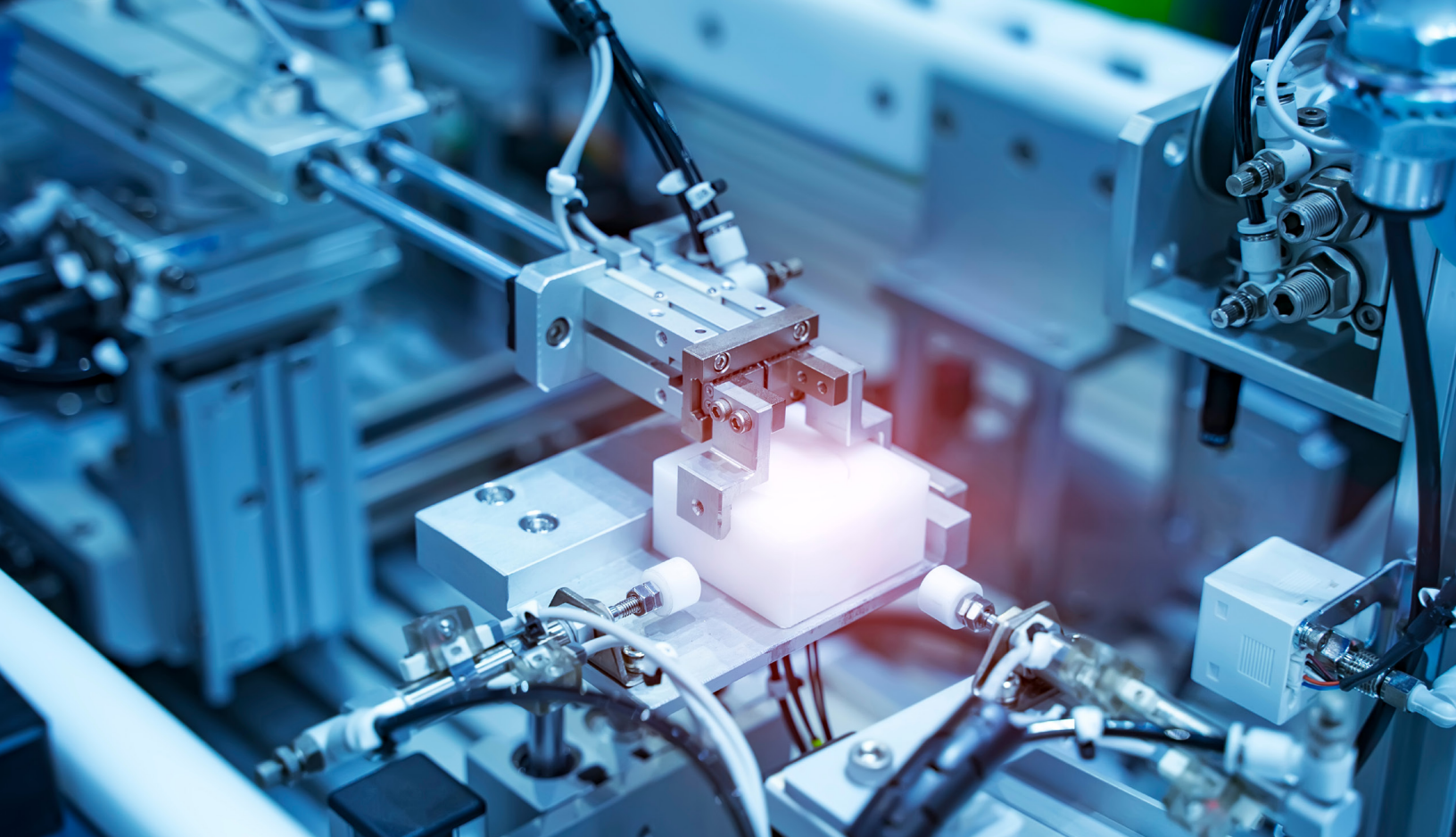
01 OPTIMIZATION ASSESSMENT AND STRATEGIC OPTION DEVELOPMENT:

The team started by collecting data to determine the equipment and process capacity and capability at each plant in the network to develop accurate manufacturing matrices. Data collection was followed by a review and confirmation of plant layouts. The plant layout analysis confirmed location of capital equipment on the production floor, and identified potential space for equipment transfers to support the potential product moves. Not all plants were visited; some were reached with phone and video interviews.

The second phase of the project enabled the team to highlight areas where risks were exceptionally high: for example, where a business continuity event would prevent delivery from another plant. As part of this effort, risks were identified and quantified. It also enabled Seraph to identify key employees, tribal knowledge, customer concerns and other areas that required additional attention.

This initial engagement resulted in a network rationalization strategy that improved business continuity preparedness, highlighted the excess capacity in the system, and set a clear path forward. Of specific note were the following findings:

- Plant utilization was less than 70% across the six targeted plants with the three worst performing plants being exceptionally underutilized.
- Sales overall were falling, which impacted profitability over the forecast period. (After the project we learned that the OEMs were executing an inventory reduction strategy.)
- Process flow charts (master routers) were developed for more than 30K Active SKUs, enabling the development of product transfer strategies based on machine work center capabilities/capacity.
- Sixteen potential single points of failure in the manufacturing network were identified during the course of the analysis.
- Three previously unknown machining center capacity issues were identified.
- A third plant was identified for closure based on poor utilization and available capacity within the manufacturing network.



STRATEGIC ALIGNMENT + MANAGEMENT PLAN

Based on the initial analysis, it was clear that plants should be removed from the client's existing manufacturing network in multiple regions. The next phase of the project was to secure Strategic Alignment and complete the Management Plan. These initiatives deal with the development of closure plans, transfer of equipment, bank builds, OEM validation assumptions, and benefits analysis. The team agreed that a closure announcement would only be made if a final board decision was taken to close a plant. This approach enabled our client to avoid the disclosure requirements associated with the WARN Act before suitable action and contingency plans were in place.

THE MANAGEMENT PLAN HAS FIVE PRIMARY FUNCTIONS:

- 01** Create a common view of the project and serve as a guideline for its execution - overall timeline, milestones, deliverables, project charters for each product, and process work stream.
- 02** Describe an agreed-upon project rational strategy and overall concept, as well as project structure, processes, and controls required for successful delivery - bank build requirements, equipment transfers, project resources.
- 03** Establish the foundation for the project appropriation required for on-going project management - overall budget for the transfers and closure.
- 04** Enable development of communication plans - internal and external communication plans.
- 05** Be the baseline for strategic alignment with the executive team and all stakeholders.

STRATEGIC ALIGNMENT + MANAGEMENT PLAN (CONT.):

Seraph understands the importance of developing Strategic Alignment as well as developing a clear and agreed-upon Management Plan. This approach has proven successful when executing strategic and tactical projects. Products, people, functions, technology, controls, and the organization structure itself are all incorporated into the Management Plan. Often clients have a target that they hope to meet without the necessary resources, data, or planning to support it. The Seraph Management Plan is always as much about the planning process and engaging the core team as it is about the document itself. The entire process allows clients to move forward in a confident, unified, and coordinated manner. Over the course of hundreds of line moves utilizing this approach, Seraph has never caused an OEM line stoppage or incurred a customer-imposed fine as a result of transfer activities. The lessons learned in these many transfers are continually built into this process and have shown themselves to be robust and effective in protecting our clients and their customers.

Seraph used the Management Plan to execute the project, establishing a PMO to control the effort and leveraging this structure to hold the client team accountable for the results while enabling them to experience success. Approximately \$10M in operational cost savings were identified related to the closures. Product and process transfer strategies were developed with bank build requirements for the two USA sending sites and six receiving sites. Customer approval strategies were developed with product family level requirements. Formal communication plans were developed to be executed with the announcement of the closures.





LESSONS LEARNED +CHALLENGES

For future medical device transfers, Seraph will have the core team take charge of the validation negotiations rather than deferring to the sales team. The sales team aligned with quality, however they under-estimated the customer requirements for the transfer/approval process of the product families from the sending sites. Having this managed by the core team would have allowed both a clear escalation to sales and an ability to be more pragmatic in the initial approach to each customer's products.

Competing initiatives need to be vetted thoroughly with respect to product family lifecycle and capital investment requirements. Transfer plans were developed with new capital investment planned at one of the receiving sites. In the end, the OEM decided to make the investment in one of its facilities and this impacted the closure of one of the sending sites. The project was delayed when sending site was subsequently required to stay open until the OEM qualified and approved the new manufacturing line. However a significant price increase was put in place during this extension, which more than compensated for the delay.

CHALLENGES INCLUDED:

- Customer validation requirements being more complex than planned
- Estimated order volumes for the following two years
- Customer driven stock levels increases beyond bank builds levels, resulting in unplanned volume increases
- Unwillingness by plant management to add shifts at a receiving plant
- Executive changes during the course of the project

THE RESULT

Value was quickly realized within the same fiscal year that the project was kicked off. Seraph took overall project management responsibility for the implementation from start to project completion. We were also directly involved in managing the launch of production into existing sites. This included working closely with the client corporate and plant management teams to drive results including:

- Leveraging the PMO to track KPIs and drive value
- Developing and controlling the internal and customer communication strategies
- Implement transfer and documentation checklists for transfers across all the sites
- Packaging and presenting key issues, decisions, and risks to the steering committee and drive actions for resolution
- Providing the necessary drive and motivation to the project team during implementation
- Being a neutral voice in customer meetings to provide transparency

COMPLETION OF SALE

At the end of the first phase of the engagement, the sale process accelerated. The work done by Seraph contributed to the Seller achieving a higher multiple based on a clear strategy and path to lower infrastructure costs while growing the top line and improving EBITDA.

ROI AND OPERATIONAL COST SAVINGS

By the end of the project, Seraph had delivered more than the forecast \$10M in operational cost savings with total project cost payback achieved in less than 18 months. Client and OEM customers viewed the project as a success and as a result customer orders continued to increase. OEMs who were initially concerned by the poor performance of a competitor's move, were satisfied with the controls and transparency that Seraph brought to the project. Top line growth was an unexpected side effect of the improved communication, performance over the course of the project, and deepened customer relationships.

POST IMPLEMENTATION EFFICIENCIES

After the deal was completed, Seraph was re-engaged to refresh and execute the strategy that had been developed. The end result was the removal of three plants from the manufacturing network, with all production transferred to under-utilized plants. Plants where demand had been lagging experienced order backlogs as a result of customer confidence and orders increasing over the course of the project. Seraph enabled clear and deliberate communication with the OEM customers to smoothly manage the new backlogs.

SERAPH DELIVERED MORE THAN THE FORECAST \$10M IN OPERATIONAL COST SAVINGS.

PROJECT COST PAYBACK ACHIEVED IN LESS THAN 18 MONTHS.



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4350 Executive Dr. Suite 310, San Diego, California 92121

Contact: Andrew Powch • **Phone:** (619) 228 3638 • **Email:** apowch@seraph.com

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WWW.SERAPH.COM

