

CASE STUDY

Improved CAPEX Effectiveness in Medical Technologies

Business Challenge: Our client is an international medical technology company that utilises highly automated precision manufacturing processes. The leadership team were concerned about increasing demands for capital to build new and more complex production machines and complained that, “Each generation of machine is one meter longer and costs one million more than the previous one.” Having defined a challenging target to reduce capital spending while also growing the business, they were worried that previous efforts had failed to deliver the required step-change and that they needed a different approach to achieve their goal.

Objective and Approach: Following a short diagnostic phase, we recommended an approach to optimise CAPEX, OPEX and Time-To-Market to avoid savings from one area reappearing as costs in another. The objective to minimise “avoidable CAPEX” and optimise total life cycle cost was jointly developed with stakeholders from across the business during a design workshop early in the project. The drivers of “avoidable CAPEX” were then identified and a series of hypothesis were developed for eliminating bad complexity and reducing the cost of good complexity. Using business intelligence tools, we then developed a data room combining information from multiple sources to produce analytics to test each hypothesis.

Supply chain analytics, including an ABC-XYZ analysis of the product portfolio, provided insights into demand patterns and forecast variability. These were used to define multiple manufacturing strategies including dedicated volume machines for high-runners, make-to-order production for configurations for other products. Manufacturing analytics identified untapped capacity that could be utilised to defer or even avoid future investments. We identified that many production losses were due to behavioural and organisational issues, rather than technical problems, and could be addressed by changes to the factory operating model.

A decision map, which described how decisions were made at each step of the innovation process, highlighted that stakeholders were frequently not involved early enough. The existing decision-making tools were inflexible and not suited to evaluating multiple scenarios, resulting in decisions defaulting to previous solutions due to time constraints. It was also highlighted that some existing performance metrics reinforced the wrong behaviours and did not support transparent decision-making.

Results and Value: The project set-up of a short six-week sprint proved highly effective and provided focus as well as creating buy-in and momentum to implement the recommended changes.

A decision-framework with pre-defined questions, decision guides and clear roles and responsibilities was co-developed to bring-forward thinking earlier in the innovation process and provide greater structure and consistency.

Leading key performance indicators were added and changes made to existing ones to support decision-making and improve transparency. A prototype for a decision model was also developed to provide an easy to use tool for rapid modelling of scenarios, trade-offs and key performance indicators.

Finally, a series of recommendations and improvement initiatives were defined together with an implementation roadmap to increase capacity utilisation by up to 50% and to support a reduction in the CAPEX ratio of up to 40%, with potential savings valued in the millions.



“S2R gave us a solution on a silver platter ... based on their insights and recommendations, it was clear what we needed to do.”

Client Project Manager