

Case Study

Requirements Definition

Overview

Client's R&D group had created an innovative product with the potential to expand their product offering. Their management group was seeking a firm with the process development and engineering experience to develop a robust industrialized method of moving the product from the lab to a manufacturing environment.

Client Information

- Product: Adhesive Label Material
 - Industry: Labeling / Packaging
 - Key Technologies: Thermal Systems, Coordinated High Speed Motion Control
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Background Information

- The client's R&D team developed a new type of adhesive film with unique features they believed could be used for consumer product labeling applications
 - The client's team had experimented with manual methods of applying the film to sample products in their labs
 - The client's team did not have the direct experience required to develop the new processes and industrial grade equipment that could demonstrate the potential of this new product in a non-lab environment
 - The client was looking for ways to accelerate development of this program by using resources outside of their normal internal product development methods
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Belcan Automation Approach

- Belcan Automation suggested a phased approach that would start with a comprehensive requirements definition study. This study would gather all of the key client stakeholders, provide guidance to the team, and identify the requirements to make this program a success for the client.
 - The results of the study would then be used to develop competing concepts to address the client's requirements
 - The next phase would be the design and build of proof of concept systems that would be used for testing the process and technologies
 - After verifying the process with the proof of principle equipment, a pilot line would be designed and constructed to test the process at normal manufacturing rates per the requirements definition
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Solution

- Led by a team of senior Belcan engineers, an intense requirements definition session was conducted with the client to understand the exact needs of their organization to make the program a success. Key topics included:
 - Business Drivers
 - Technical Requirements
 - Product Characteristics
 - Product Performance
 - Manufacturing System Performance
 - Financial Considerations
 - Market Forces
 - Client Participants
 - Engineering
 - Product Development
 - Marketing
 - Upper Management
 - Manufacturing
 - Procurement
 - The results from the requirements definition session were used to generate a number of manufacturing concepts for consideration
 - A proof of concept system was built to test key technologies and processes
 - After gaining confidence with the proof of concept equipment, a high speed pilot system was built to prove the viability of the manufacturing process
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Benefits to Client

- The phased approach suggested by Belcan allowed the client to proceed with this development program in a logical low risk manner
 - By investing in the requirements definition process and working with Belcan Automation, our client was able to fast track the development of new manufacturing processes that were unique to the product they had developed.
 - The breakthroughs that resulted allowed the client to quickly move forward with introduction of this new product to their customers
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