



Case Study

Manufacturing Defect Reduction

Manufacturing Process Improvement Reduces Scrap

Client Situation:

Each year during the warm and humid months, printed circuit boards experienced a high delamination rate during soldering. The problem could be reduced but not eliminated by baking the boards prior to processing.

Client Problem:

Baking was expensive, subjected the boards to potential handling damage and did not guarantee to eliminate the delamination problem. The scrap costs were approximately \$5 million per year. The problem occurred each year and an acceptable solution was needed quickly.

InnoCentrix Solution:

Led a multidisciplinary analytical team using a variety of polymer characterization and surface analytical tools. Found an unexpected contaminant in the laminate from a manufacturing process. The contaminant absorbed and retained moisture at an interface. The thermal shock at solder caused the moisture to rapidly expand and delaminate the circuit board. Performed extensive process audits and experiments to eliminate the contaminant. Worked with process engineers to modify the process and eliminate the contaminant.

Client Benefits:

After completing the process modification, the delamination problem was eliminated resulting in two-year savings of approximately \$10 million dollars.

Testimonials

Associate Research Director, Fortune 100 Company –

"InnoCentrix has the ability to align business leaders, sales and marketing, and technologists to define a new product opportunity, develop a scientific approach, conceptualize, and lead the development and commercialization activities. In my 25 years of industrial research management, I encountered few who could do this as well as InnoCentrix."

Vice President of Technology, Fortune 100 Company

"I selected InnoCentrix because they have a strong focus on the commercialization process and the requirements to drive a research concept to a profitable business. This unique skill provides them with the leadership and courage to identify the key strategies for a business to grow and prosper."

Director of Marketing, Fortune 100 Company –

"InnoCentrix provided us with valuable insight into a high growth emerging market opportunity in electronic materials. They outlined the technical requirements to successfully enter the market and offered a detailed description of the material modifications and testing required. Their unique combination of technical and business expertise was extremely valuable to our team."