

# Product Development & Design Engineering

## Market Driven Product Development from Concept to Manufacture

As product life cycles continue to get shorter, the need for new product innovation is relentless. If you miss opportunities to bring innovative solutions to market, your company can quickly become irrelevant. Innovation is no longer an option for growth, but a requirement for survival. And sadly, studies now suggest nearly half of the resources companies devote to the development of new products are spent on products that ultimately fail.

Deaton Engineering can help you develop a strategic plan for product and technology investment decisions based on your needs. We follow a phase-based approach to product development and innovation that includes defining user requirements, design conceptualization, development, prototyping, testing, and manufacturing preparation. We strive to help you integrate current technologies into new products, achieve superior ROI, accelerate time to market, and create a positive business impact.

Deaton Engineering applies a dynamic design process that allows us to collaborate with you to create profitable, high-quality products quickly and efficiently. We provide turnkey product development from concept through manufacture.

## Optimizing Designs for Manufacturability & Reliability

### Product Innovation and Product Definition

At the onset of a project, Deaton Engineering works with you to carefully define the goals, user requirements, and functional specifications. We examine how the product will be used, the quantities needed, how and where the product will be manufactured, and which certifications and classifications are required.

### Feasibility and Cost Analysis

After the product is defined, material options, manufacturing techniques, and locations are evaluated. We assess how the product can be designed within a specified budget and manufactured at a target price.

### Product Design and Optimization

Our unique process of concurrent, multidisciplinary innovation is tailored to meet your design and manufacturing development needs. Off-the-shelf components are integrated when appropriate in order to optimize cost and efficiency. When necessary, we also employ high-end tools such as Finite Element Analysis and parametric modeling to optimize the design.

## Product Development and Design Engineering Services

- SolidWorks & ProE
- 3d and parametric design
- Computer aided design (CAD)
- Solid modeling
- Mechanical design
- Electrical & electronic design
- Portable electronics
- Military products
- Appliance design
- Consumer product design
- Product packaging
- Product engineering
- Digital prototyping
- Rapid prototyping
- Marketing & functional prototypes
- Rugged design
- Human factors design
- User interface design
- Plastic & metal design
- User centered design
- Design for shock & vibration
- User requirements & functional specifications
- Concept development
- Industrial design
- Design for usability & user experience
- Design for quality
- Design for manufacture (DFM)
- Design for UL & CE standards
- Enclosure design
- Electronics packaging
- Design for validation
- Design optimization, (FEA)
- Medical device design
- Contract manufacturing services
- Engineering services list
- Product development experience

