

HARNESSING THE POWER OF VALUE ENGINEERING

Working with you to overcome challenges for a better tomorrow

Functional analysis brings product improvements and lowers costs

Medical device companies are constantly challenged to rethink efficiencies and cost savings during the product life cycle. Changing economies, competition, and healthcare systems are among the pressures these businesses face. Value Engineering (VE) is a systematic and function focused decision process for responding to these hurdles while keeping the core product intact.

As part of our comprehensive engineering solutions, we at Cyient provide this structured methodology for optimizing value, function, and performance of products and subsystems. These standardized techniques can lead to refining products by removing features that are not needed, reducing costs by sourcing alternate materials from low-cost suppliers, and lowering weight. In some cases,

we have identified improved value in sources such as bill of materials (BOM) or other cost drivers within the supply chain. We target a cost reduction in the range of 15 to 25%; however, we have reduced costs as much as 30% in some cases for clients in the medical space and across other major industries.

Why partner with us?

- Multidisciplinary standard procedures and frameworks based on past medtech OEM projects
- 75+ VE-certified specialists across major industries to analyze productivity and functional savings without compromising performance
- In-house manufacturing and sourcing capabilities and global service and supply network for capitalizing on low-cost country advantages

Process and Analyses Methods

Information and Pre-concepting	Function Analysis and Creative	Detail Designing and Evaluation	Prototyping and Other Development	Presentation and Supporting Launch
Market research Benchmarking studies Voice of customer Tear down analysis Regulatory compliance studies	Ideation Re-engineering Retrofitting Design baselining	Manufacturing drawing Modeling Design validation Design and cost optimization Tolerance stack-up studies Motion analysis	Ordering parts Vendor interaction Expediting manufacturing Prototyping support Physical testing support Design optimization	Pilot build support Customer education session Manufacturing engineering support Product realization support

KEY SERVICE OFFERINGS

- Cost, material, and variant reductions
- Performance and functional enhancements
- Design, product, and engineering optimizations
- Alternate manufacturing processes
- Reverse engineering
- Redesign



Success Stories

Leading Portable Dialysis RO

The client engaged us to reduce the overall cost of the product, make functional enhancements, and ensure that the design changes didn't affect the regulatory requirements.

Our team optimized the BOM, CAD models and drawings, electrical schematic and wiring diagrams, PCB Gerber file, and then developed prototypes. We assessed suppliers, updated DHF/DMR, and reduced the disinfection cycle time so that the same dialysis machine could do more cycles.

We also reduced the overall size and weight of the machine and added features such as a leak detection mechanism and end-to-end machine disinfection.

Additionally, we reduced the maintenance costs by minimizing the failure of the components. This resulted in an overall product cost reduction of 20%.

Leading Dental Health Care Product

Our client approached us to evaluate cost reduction opportunities without affecting current manufacturing processes, function, and design. The product is the client's core revenue generator, so we were aware that certain design changes could risk the client's business and possibly their regulatory status.

Utilizing a Six Sigma process within the value engineering method, the team completed sub-assembly design changes. This yielded a \$2 million annualized material savings and \$1.5 million yearly savings in manufacturing process when implemented.

About Cyient

Cyient is a global provider of engineering, manufacturing, data analytics, networks and operations solutions. We collaborate with our clients to achieve more and shape a better tomorrow.

With decades of experience, Cyient is well positioned to solve problems. Our solutions include product development and life cycle support, process and network engineering, and data transformation and analytics. We provide expertise in the aerospace, consumer, energy, medical, oil and gas, mining, heavy equipment, semiconductor, rail transportation, telecom and utilities industries.

Strong capabilities combined with a network of more than 13,500 associates across 38 global locations enable us to deliver measurable and substantial benefits to major organizations worldwide.

For more information about Cyient, visit our website.

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