

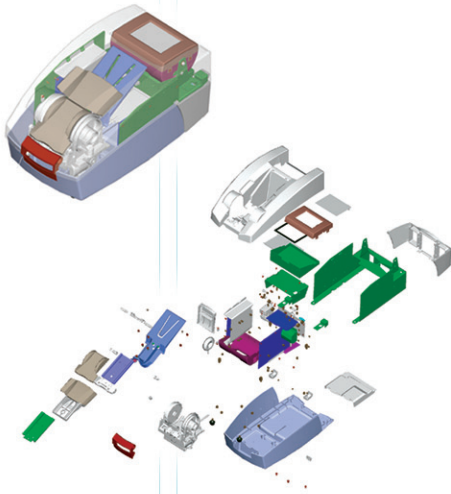
#### project involvement

- human factors design
- industrial design
- mechanical engineering
- prototyping
- project management



# innovations

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## GE Medical-Lunar Portable Ultrasound Bone Densitometer

GE Medical-Lunar retained BSDA to redesign their first generation “moveable” ultrasound bone densitometer into a truly portable device with added product utility, and to explore opportunities for cost reductions through design for easy assembly and more cost effective manufacturing processes.

The new device developed by BSDA and GE Medical embodies several design enhancements including a self contained fluid handling system instead of a water bath. Very thin membranes fill with water and surround the patients heel, so that patients are no longer required to immerse their foot into water. The elimination of sterile and waste water tanks resulted in a 60% size and weight reduction. Adjustable foot position and support devices act as a protective cover during transport and a swiveling touch-screen operator interface with automatic angle sensing enhances operator convenience. The new product architecture, made up of modular sub-assemblies and injection molded instead of fabricated components, uses only one third of the parts of its predecessor, reducing product cost by 30%, and significantly improving assembly, servicing and eventual recycling.

Brooks Stevens Design acted as the “gate keeper” of the project and assumed not only industrial design, engineering and prototyping responsibilities but also managed the tooling and production ramp-up phases.

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