

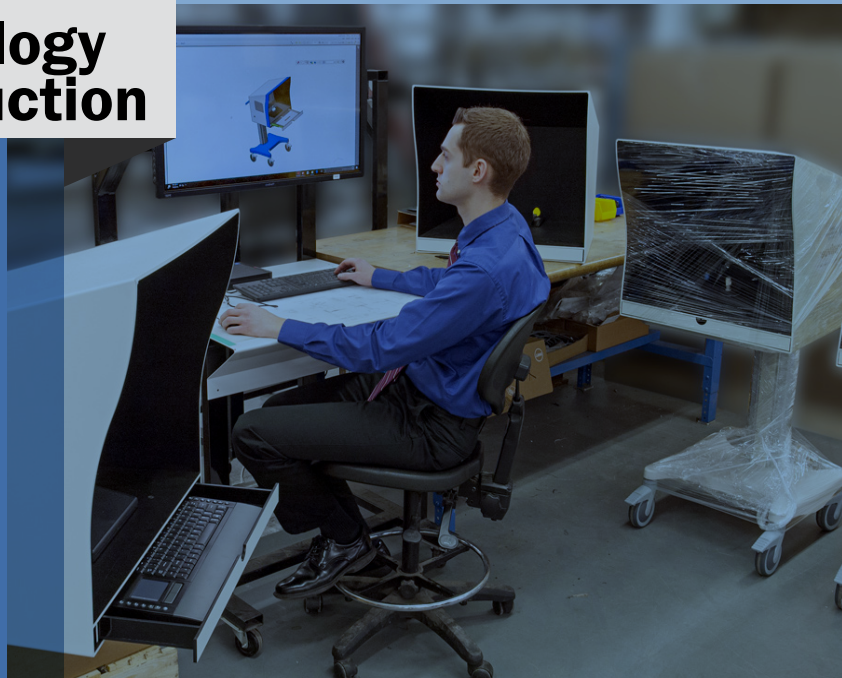


PRODUCT DESIGN & DEVELOPMENT

Advancing Neurotechnology From Prototype to Production

Background

The lack of standards of care for screening and testing for cognitive decline is a major problem in healthcare. Current methods for detecting cognitive decline are dated and ineffective. Screenings are typically done using old-school methods and are often performed too late, after the patient has already shown signs of cognitive decline. The need for new, proactive screening solutions to detect early signs of cognitive decline cannot be understated.



Executive Summary >>

Industry: HEALTHCARE
Company Type: STARTUP
Location: NEW YORK

TIMEFRAME

- + 2-3 Months Design & Development
- + 1 Month Prototype Builds
- + 1 Month Production Builds

CAPABILITIES UTILIZED

- + Mechanical Engineering
- + Manufacturing Engineering
- + Design for Manufacturability (DFM)
- + Production Planning & Manufacturing
- + Final Integration & Assembly
- + Quality Management System
- + Codes & Regulatory (CFR 21 & ISO 13485)
- + Procurement, Packaging, & Logistics

RESULTS

- + Scalable, cost-effective, production-ready design
- + Production process accommodates peaks & valleys
- + Support for 2nd generation design and prototypes

Challenge >>

Backed by 15 years of research, an early-stage neurotechnology startup had developed a first-of-its-kind computerized cognitive assessment platform to address these challenges.

The Company's initial aesthetically pleasing prototype design was not conducive to large-scale production manufacturing. Additionally, forecasting for the new product was proving to be a challenge.

With little manufacturing experience, the startup needed to find a contract manufacturing partner with development and engineering experience that was capable of developing a cost-effective production solution.

Solution >>

After learning about PEKO through our relationship with an entrepreneur incubator, the startup partnered with us to refine and build their new neurotechnology. Brought in during the early prototype phase, PEKO was challenged to balance cost and function with a visually appealing design.

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Solution, continued >>

PEKO's mechanical and manufacturing engineers took a design-for-manufacturability approach and were able to make various recommendations for a cost-effective and scalable design solutions.

PEKO's extensive manufacturing experience and capabilities allowed for a functional, cost-effective design that satisfied all the Customer's requirements for their revolutionary cognitive testing equipment.

Once their design was finalized, it was easy to transition to production. PEKO designed the unit to allow for further production optimization as volumes increase to expected levels. This permitted PEKO to accommodate production peaks while remaining flexible through time periods of reduced production demand.



Success >>

The electromechanical neurotechnology was a great fit for PEKO's 50 years of engineering and manufacturing experience. Through close collaboration with the Customer, PEKO was able to design and manufacture a cost-effective cognitive assessment platform without having to compromise the "look and feel" of the original prototype design. These units meet all functional, aesthetic, and regulatory (FDA) requirements and its deployment has revolutionized the cognitive testing landscape.

The Customer is able to sell this cost-effective unit while utilizing alternative production methods to meet the initial lower volume demand. PEKO invested in additional capital as sales and production increased to expected levels so that the Customer could continue to ramp up production without large amounts of capital investment. PEKO's versatile capabilities allowed our customer this flexibility, to make the most effective business decision, while simultaneously laying the foundation for future production.

ABOUT US

PEKO Precision Products, Inc.

PEKO Precision Products is a leading contract manufacturer providing end-to-end manufacturing solutions for machinery, equipment, and major electro-mechanical assemblies. From design and prototyping to production, PEKO's capabilities span the entire product lifecycle, including design, engineering, development, machining, sheet metal fabrication, electrical integration, assembly, and production. PEKO also supports early-stage startups and programs through its New Product Introduction division, a dedicated space that supports low-volume builds that are still in the design phase.



innovation | preparation | replication

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