

Pillar
PRODUCT DESIGN

The Pillar Design Studio

Over the last 10 years, the Pillar Design team has assisted our clients in launching multiple world-class, innovative products in a variety of highly competitive industries. Pillar's top tier clients range from small, newly founded start-ups to well established corporations. Our dynamic team has both the resources and agility to handle both small and large multi-faceted projects. We are an energetic, passionate, and creative group of individuals with a deep knowledge and understanding of user-interface, ergonomics, design, materials and engineering that can meet your demanding product development and engineering needs.

With a high level of service and quality, the Pillar team can quickly and cost-effectively take your innovative ideas from concept to reality. That is why so many companies, both large and small, have entrusted the Pillar Product Design team to bring their most valuable flagship products to the marketplace.

Pillar Product Design is located in Seattle, the hotbed of the most high-tech, innovative start-up companies and corporations in the world. These companies have relied on the Pillar Design team for many years to provide them with both innovative and creative solutions for their product development needs.

Pillar Design's Core DNA

Our core objective is to build and develop long-lasting and meaningful business relationships with innovative individuals and agile companies who work in fast moving market places. At our core, the Pillar team can allocate the necessary resources and attention to detail to meet your demanding product development needs. We understand that this is a journey that we will be taking together and it takes a dedicated team with a clear vision to succeed in developing a successful product. As a company we have spent incredible resources and effort to solve some of our clients' most challenging and difficult design and engineering obstacles. Where many studios have failed, we have succeeded. Our mission is to deliver quality services that will exceed our clients' expectations and goals throughout our partnership.



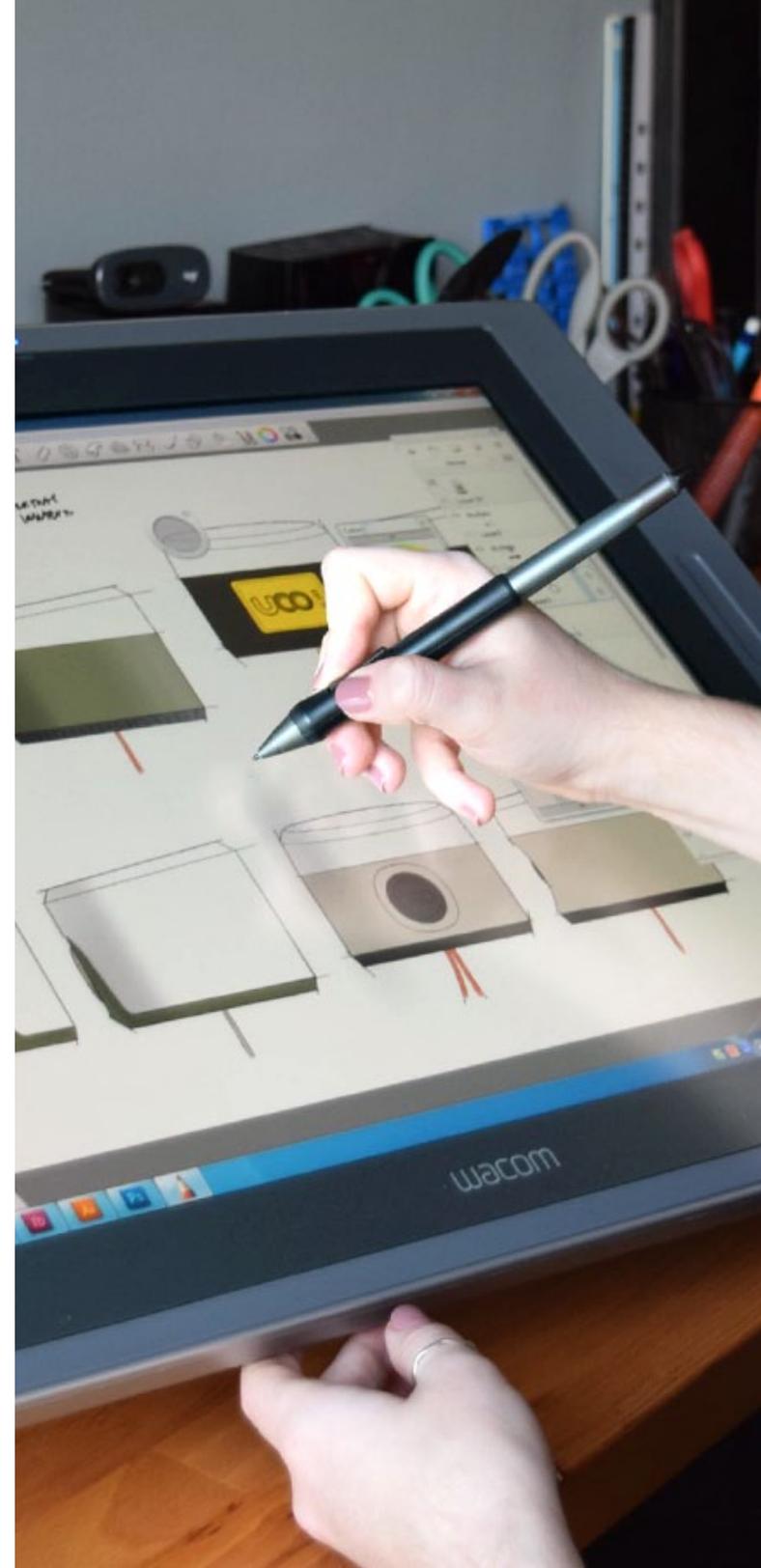
Our Process: Phase I

Invention, Research, Exploration and Discovery

The foundation for a successful project, the initial phase focuses on accurately capturing and cultivating the genesis of your innovative idea. A variety of concepts are developed through sketching and quick modeling, allowing evaluation of a range of solutions. As a team we will go through a series of strategic processes and procedures to take multiple ideas and concepts, and form them into an optimized cohesive design. We want to deeply understand the human interaction elements with your specific design and develop seamless interfaces that have long-lasting intrinsic value. We bring invention, creativity and passion to every product and project we develop.

We offer the following Phase 1 services:

- Schedule Development
- Brainstorming
- Research, Exploration, Investigation
- Storyboarding, Mood Boards
- Product Concept Mapping
- User Profile, Experience, Interface
- Ergonomic Parametric Design
- Concept Development, Industrial Design
- Client Meetings and Presentations
- Presentations, Reviews, Feedback
- Materials, Initial DFMA Research
- Preliminary Process Identification
- Preliminary CAD Model Development
- 2D Renderings for Sales and Marketing



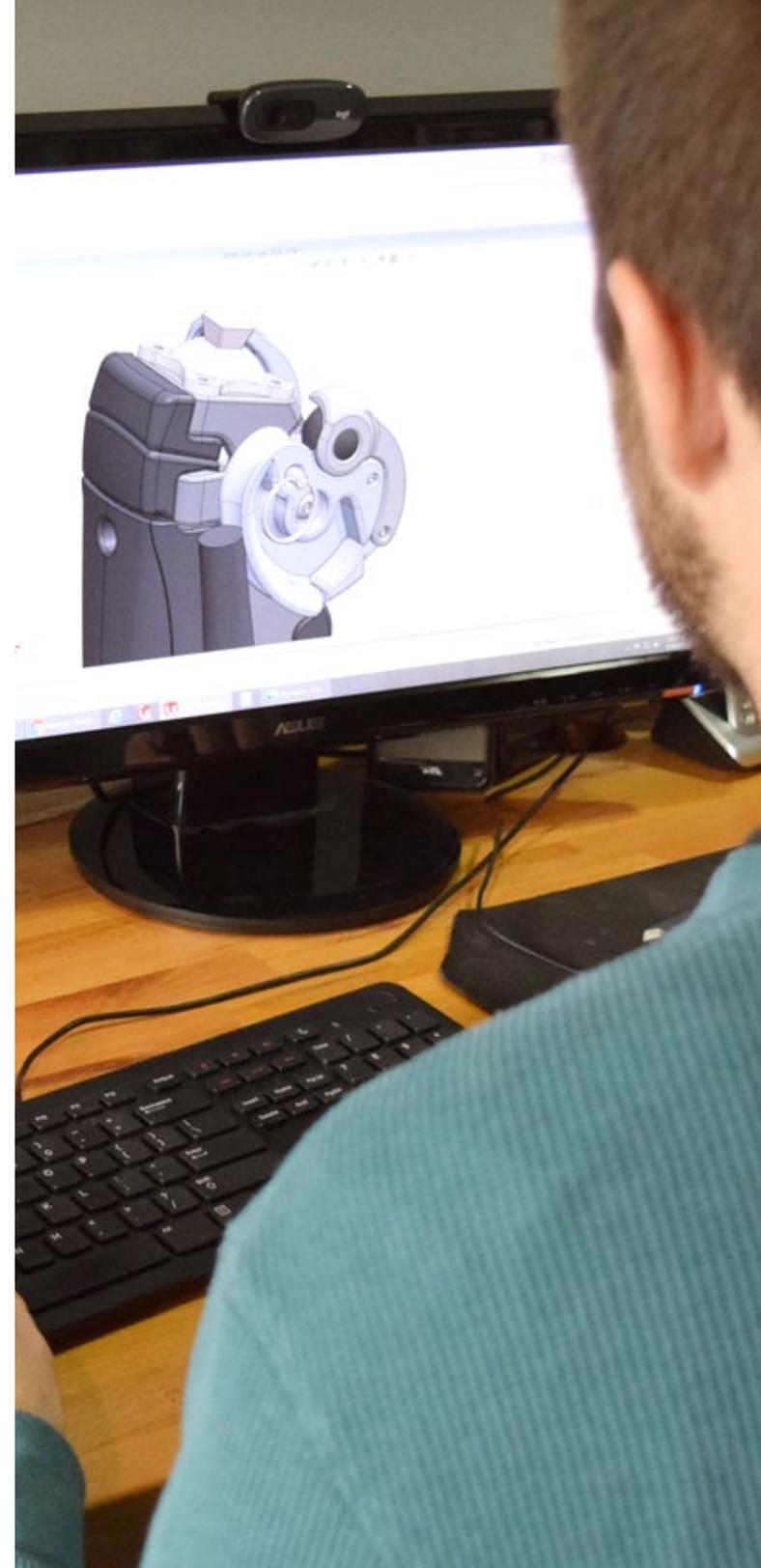
Our Process: Phase II

Foundation, Definition, System and Engineering Refinement

Our team uses engineering and 3D CAD software tools to quickly and cost effectively take your core design into prototype or production development. Our forward-thinking team approach and communicate these challenges head on before they become a costly problem. Collaborative engineering design reviews and refinement will guarantee that your design is absolutely ready for prototype and or production output. Our mission is to provide innovative and seamless solutions as it relates to design, materials, mechanical, process and electrical integration. Pillar's proven product development procedures allow for precision based communication between all parties in the production development process.

We offer the following Phase 2 services:

- 3D SolidWorks / Rhino CAD Modeling
- Advanced Surface Modeling
- SolidWorks FEA Simulations
- Mechanical Engineering
- Electrical Component Specifications
- PCB, Flex, Firmware, Software Integration
- IoT, Wireless, Bluetooth Circuit Development
- Cut and Sew Flat Pattern Development
- Initial Prototype Development
- Packaging Engineering Design
- Materials and Process Qualification
- Tooling and Part Design Analysis
- Tolerance Stack Study
- Assembly Analysis
- Engineering Drawing Development
- BOM (Bill of Materials)
- Preliminary Production RFQ (Request for Quote)
- 3D Photo-Realistic Renderings
- 3D Photo-Realistic Animation Work



Our Process: Phase III

Prototype, Fabricate, Test, Modify and Refine

Let's work together to bring your idea into the real world so we can put it to the test! Pillar offers a wide spectrum of prototype and pilot production services and competencies. We have in-house 3D SLA and FDM printing capabilities as well as fully equipped shop for hand fabricated custom builds. Pillar is partnered with a number of trusted prototype houses that have an extensive array of fabrication capabilities. Pillar also has extensive domestic and overseas electronic fulfillment services that include everything from beta pilot builds to mass production. Our partner facilities can handle small batch builds around PCB and flex circuit board creation. Our strength is our ability to quickly validate your design and bring you a near-to-production quality prototype.

We offer the following Phase 3 services:

- 3D Printed SLA and FDM Prototypes Builds
- CNC Machined, RTV Cast and Stamped Prototypes
- Cut and Sew, Flat Pattern Sample Builds
- Assembly Optimization and Refinement
- Electronics PCB and Circuit Fabrication and Cycle Testing
- Production Packaging Flat Pattern
- Finalize DFM (Design for Mfg.)
- Finalize Production Materials and Processes.
- Product Testing and Component Validation
- Sales and Marketing Pilot Runs (up to 20 samples)
- Preliminary Testing Certification Assistance (NSF, FDA, UL, ASTM, ANSI and EU testing)



Our Process: Phase IV

Supply Chain and Mass Product Development

Pillar has already done the ground work to meet your product quality, cost and delivery requirements. We have spent over 10 years working diligently with our prototype and manufacturing network and supply chain to establish trusted business relationships. We have a complete infrastructure of project management and quality control personnel who perform onsite factory visits and production inspections. In comparison to most design studios, our competitive edge is our extensive spectrum of available services combined with our reliable manufacturing network. We understand the tools and the collateral needed to clearly communicate every aspect and detail of your project and we have detailed procedures and protocols in place to seamlessly execute your production launch.

We offer the following Phase 4 services:

- Project Scheduling Planning.
- Risk Assessment and Analysis
- Domestic and Overseas Outsourcing Audit and Analysis
- Logistical Supply Chain Planning (Get your product in the right hands)
- RFQ/ RFP (Request for Quote and Price) Based on Your Annual Requirements
- Part and Tooling Pricing Negotiations and

Payment Terms

- Mass Production PCB and Flex Circuitry Development
- Production Cut and Sew Fabrication Optimization
- Tooling Development and DFM
- First Article Production Assistance, Review and Feedback
- Assembly and Manufacturing Process Optimization
- QA/QC Specifications Document
- Onsite Project Management QA / QC Assistance



Inspiring Individuals. Innovative Companies. Market Leaders.

For over 10 years, the Pillar team has brought our product development knowledge, experience, and expertise to a wide range of product development projects. Our deep understanding of diverse markets has allowed us to create world class products that inspire the most critical of consumers and clients.



Outdoor Industries

Pillar has had the opportunity to work with the most innovative leaders in the outdoor industry. Our team has the combined design and engineering expertise to meet your product's extreme and demanding requirements.



Consumer Goods

The Pillar team has a broad knowledge and deep understanding of consumer products. We understand the focus, energy and dedication needed to successfully bring a world class product to market and have assisted many clients with this process.



Kitchenware

From commercial to consumer, Pillar has developed a number of successful and innovative products in the kitchenware industry. We have worked in conjunction with professional chefs to develop high end, NSF approved products. Understanding what tools work in professional kitchens is our expertise.



Consumer Electronics

Pillar's mechanical and electrical experience ranges from simple single-sided PCBs to miniaturized circuits, flex circuits to low power BLE, IoT cloud based networks to wireless technology. With an extensive network of both domestic and overseas electronics prototype and production capabilities, Pillar is equipped to support your electronic development needs.



Health & Medical

With experience ranging from custom prosthetics to equipment for in-hospital triage centers, Pillar has worked with a variety of medical personnel to design and engineer life-changing products that prioritize the user.

UW Medicine
UNIVERSITY OF WASHINGTON
MEDICAL CENTER



Bellegrove
medical

CUEMED



Camera & Film

Our team's close attention to detail and ability to blend form with rugged functionality has allowed us to work closely with a number of innovative companies in this space. Pillar's deep understanding of user-interface, optics, and the photography and film development process makes us a unique collaborator.



Soft Goods

Our team has developed the knowledge and experience to develop optimized technical soft goods. We understand how to cohesively integrate textiles with mechanical components or electronics to create optimized, highly functional products.



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