

TOOLS AND TIPS FOR DESIGNING AND PROTOTYPING AN IDEA

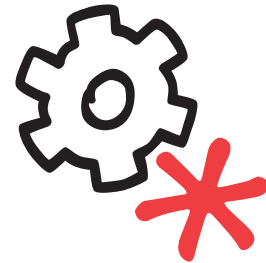
WhiteBoard is an innovation and design consultancy. We are uniquely equipped to ask the right questions, imagine the possibilities, and make them into reality.



CONCEPT



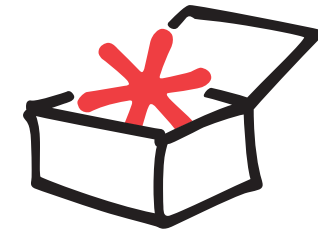
DESIGN



ENGINEER



BUILD



BRAND

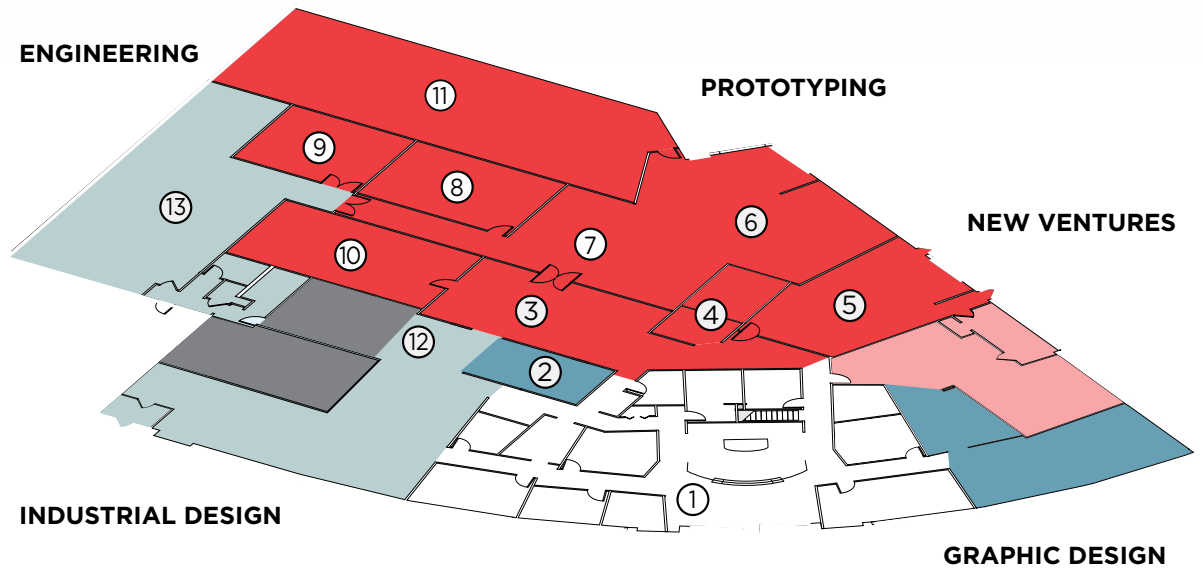
- WhiteBoard was established in 1986 as a full service product development consultancy
- Our mission is to be the ultimate resource for product development for our clients
- Industries serviced range from toys to medical to light commercial
- We believe diversity is our best asset, with much cross-pollination between industries
- Staff consists of program managers, industrial & graphic designers, engineers, model makers, and inventors
- We take a holistic approach to product development and believe “Form Follows Reality”





Diversity and Collaboration

Our 23,000 square foot facility is designed to promote collaboration, encouraging the sharing of ideas between departments.



- | | | |
|-------------------|---------------------|-----------------------|
| ① Client Services | ⑥ Metal Fabrication | ⑪ Vehicle Development |
| ② Photo Studio | ⑦ Project Assembly | ⑫ Soft Goods |
| ③ Design Modeling | ⑧ Wood Shop | ⑬ Large Projects |
| ④ CNC | ⑨ Paint Shop | |
| ⑤ Machine Shop | ⑩ Molding | |

Industrial Design

Creating value through smart design



CAPABILITIES

- User Needs & Product Research
- Form Factor Development
- Concept Development
- Ergonomics
- Design for Manufacturing
- Graphical User Interface

Engineering

Design intent becomes production reality



CAPABILITIES

- Program Management
- Manufacturing Sourcing and Estimating
- Concept Development
- Materials & Process Selection
- Mechanical/Mechanism Design
- Pro/ENGINEER & SolidWorks Platforms
- Manufacturability and Assembly Design
- Product Testing
- Failure Modes and Effects Analysis
- Engineering Documentation

Prototyping

Transforming ideas into tangible products

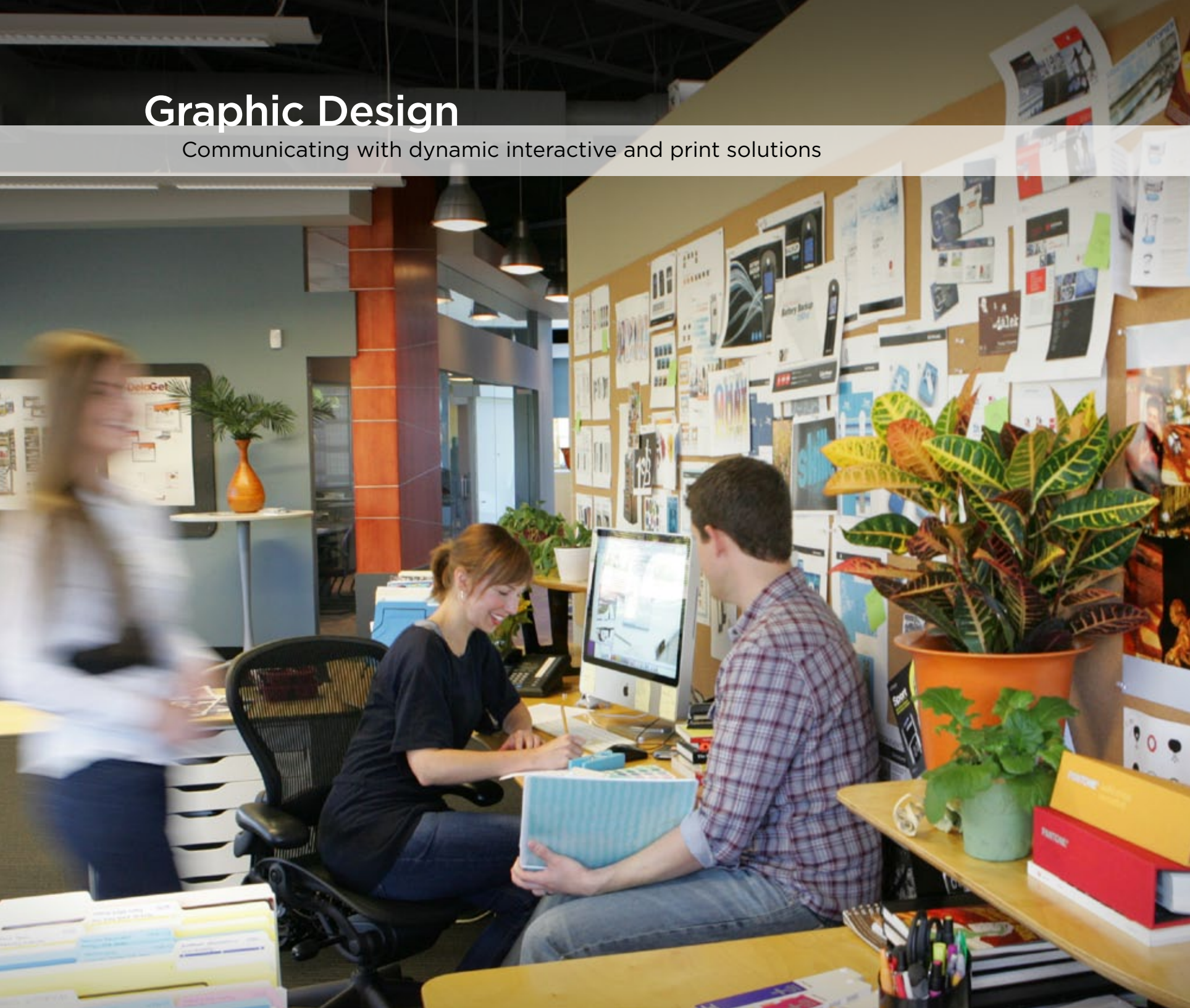


CAPABILITIES

- CNC Machining
- Metal Fabrication
- Thermoforming
- Silicone Molding
- Urethane Casting
- Injection Molding
- Vapor Polishing
- Custom Painting
- Short-Run Production

Graphic Design

Communicating with dynamic interactive and print solutions



CAPABILITIES

- Brand Development
- Naming
- Package Design
- Product Photography
- Website Design
- Collateral Materials
- Multimedia Presentations

New Ventures

Invention and licensing in the context of product development



CAPABILITIES

- Invention
- Licensing
- Trend & Lifestyle Research
- Line Development
- Category Development

Our Work

We are critical thinkers with one goal - to create value by maximizing your product's impact with customers and end users.



WhiteBoard collaborated with Greg LeMond and his team to design and develop a direct drive trainer that is designed to mimic the inertia of a rolling bicycle with a realistic road feel. This trainer was inspired by one Greg used while training for the Tour de France.

The Revolution direct-drive bike trainer's features include: high inertia technology with a larger flywheel adds inertia with a wider range of resistance, progressive wind resistance that progresses with your speed, creating a smooth pedal stroke with no lag, easy on, easy off design, a more stable frame, a power pilot meter, and it fits on all road bikes!

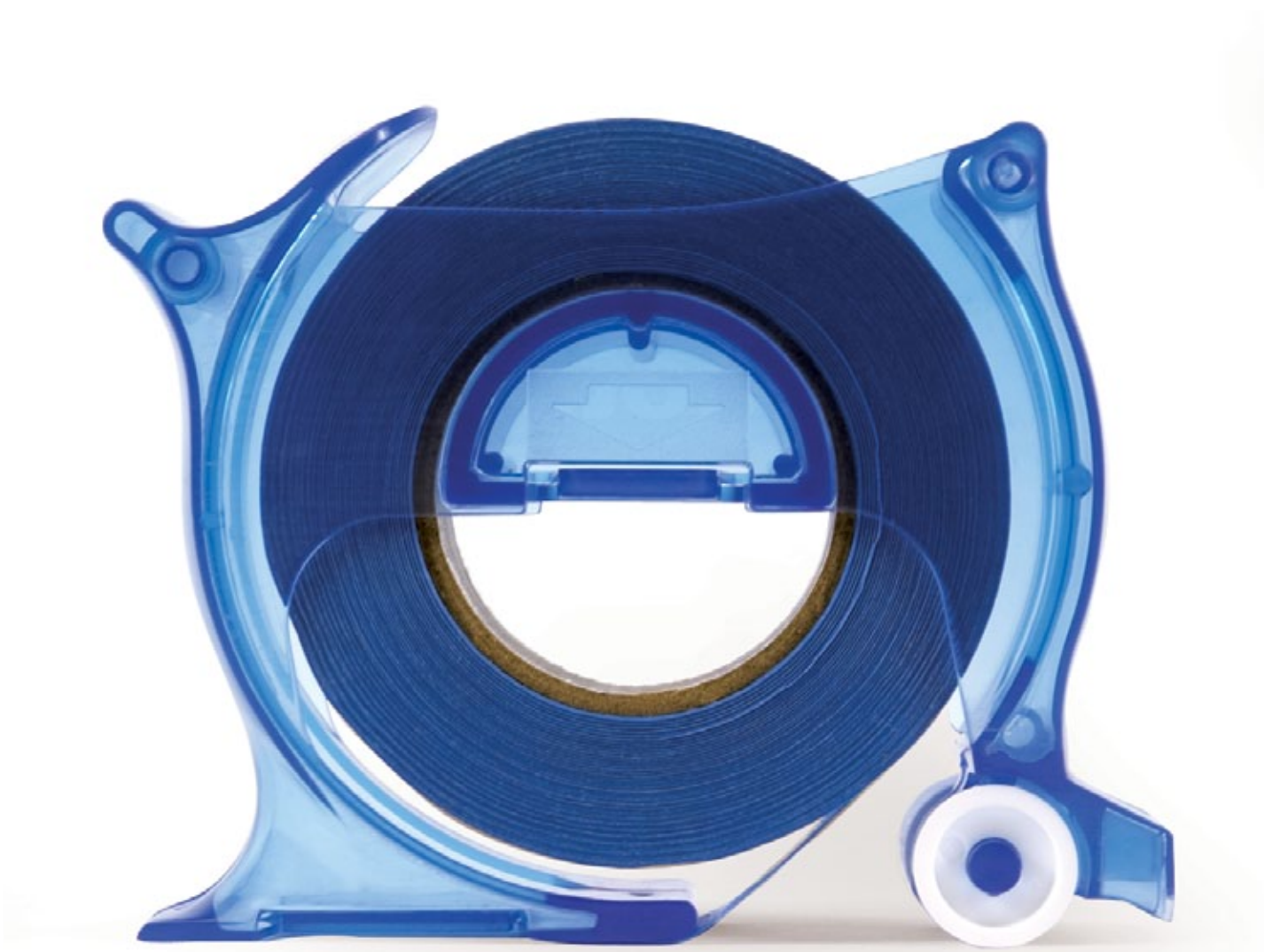
LeMOND FITENSS Revolution Direct-Drive Bike Trainer



Arctic Cat was hot to get a piece of the lucrative sport ATV market. They'd already arranged to have Suzuki supply them with the engine and chassis for one of the industry's best selling machines. However, it turned out that other industry players had also taken these very same steps. How was Arctic Cat going to differentiate their introductory product in this highly competitive market?

The Arctic Cat and WhiteBoard team started by better understanding their target consumer: the sport ATV rider. Seeking answers in Southern California, the mecca of motor sports, they learned that racers cut their fenders off to improve track visibility, all part of a bigger trend in which enthusiasts customize their rides in a variety of ways. Inspired, they developed the detachable fender concept.

ARCTIC CAT DVX All Terrain Vehicle



3M wanted to establish and promote the use of their Scotch-Blue™ Painter's Tape. Working with focus groups, WhiteBoard put their development expertise to work, generating a series of applicator concepts to meet the aesthetic, functional, and ergonomic needs of the do-it-yourself consumer. A thorough investigation of 3D form and detailed mechanism design prompted the creation and testing of numerous prototypes featuring various roller configurations. After quantifying the results, one tape applicator design was selected for final design, engineering, and production. The Scotch-Blue dispenser would become an immediate hit with consumers at The Home Depot. The unparalleled performance of the patented Scotch-Blue™ Handmasker™ has quickly highlighted the superior value and benefit of using the trademarked Painter's Tape.

3M SCOTCH-BLUE Painter's Tape Dispenser



WhiteBoard was challenged to design the next generation peripheral for the next installment of Cabela's Dangerous Hunts. The Industrial Design and Engineering teams worked with Activision to design and develop the next generation peripheral for the Cabela's Dangerous Hunts series. This design was prototyped as a "Looks Like-Works Like" unit to review gameplay and for initial marketing review. The Wii peripheral also laid the groundwork for development of the PS3 and Xbox 360 game controllers.

Released with Cabela's Dangerous Hunts 2011, this controller enhances game play with pump action reloading, adjustable stock, and a red filter scope to reveal your "Hunter's Sense".

ACTIVISION Top Shot Elite for Wii and PS3



Spalding's first production inflatable basketball was introduced in the 1980s. Ever since, these products have been plagued by one continuing problem—over time, they lose air. If you're without a pump or the proper needle to re-inflate, the fun can go flat.

WhiteBoard launched an ideation and prototyping process in which an assortment of basketball-pump combinations were built and rigorously tested for both durability and performance. The winning pump design adds one pound of air per minute and includes a relief valve for over-inflation, all without compromising the feel and performance of the basketball. During the first year, sales were five times the expected amount with over one million balls sold. Spalding then introduced the pump to its new line of sporting balls and has enjoyed an enormous infusion of profits ever since.

SPALDING Infusion Pump



Often under-utilized, the original Northgreen Communications collection box needed an update. The collectors are widely used at McDonald's Drive-thru windows around the country. The scope of the new collector had to encompass improved visual perception, ease of use, and heightened security. About 30% of the proceeds were being lost to theft, improving the security of the box was crucial.

The revamped design incorporates twelve-gauge powder-coated steel, a high impact ABS/Polycarbonate hood and redundant locks to deter the most determined of thieves. Ease of use and the exterior appearance were optimized to increase charitable donations. WhiteBoard managed the short-run prototype process while working with Chinese manufacturers. A leading fast-food company will install these units at 8,000 locations across the U.S.

NORTHGREEN Drive-Thru Donation Collection System



Boldt Products Inc. chose WhiteBoard to develop a line of personal hydration products that would have a point of difference in a saturated market. WhiteBoard's solution was the first pack to use a semi-rigid reservoir and a hose-positioning armature that puts the mouthpiece exactly where it's needed. The whole system was designed to accommodate hot and cold liquids with the added benefit of being dishwasher safe and easy to air-dry.

The Boldt product line generated a fire storm of attention at the 2003 Outdoor Retailers show with its industry changing ingenuity and solid branding strategy. WhiteBoard's commitment to innovative solutions, manufacturability, and user needs were spot on enough to attract an industry leader to purchase the company!

BOLDT Hands-Free Hydration



Technuity, a supplier of batteries, came to WhiteBoard with a new product—already designed and ready to launch—and asked for their opinion. This universal portable outlet, a combination of an inverter and a high-powered lithium ion battery, provided users with an on-the-go power source for their on-the-go electronics. Its uses were many—but this new technology was completely unfamiliar to the consumer.

WhiteBoard's opinion: the new product idea was amazing, but its current design didn't communicate its purpose to consumers. So the Design Department put the outlet squarely on the front of the device, immediately demonstrating how to use it. They also added corners with rubber bumpers for cord management. Branded by Energizer, the new portable outlet is currently grabbing consumers' attention at mass market retail.

TECHNUITY Energizer, Energi To Go™



The New Ventures Department developed a timely idea, an athletic bag with a blower to dry and remove odors from clothes, gear, and equipment. But WhiteBoard needed just the right partner to take it to market. WhiteBoard presented the technology to Shock Doctor as a product line with a huge point of difference that could get immediate distribution in the highly competitive sports bag market.

Shock Doctor, a respected sports protection company, recognized the potential of the Power Dry system and licensed the technology. WhiteBoard provided their design, engineering, and sourcing expertise along with trips to Asia to work with vendors. The Shock Doctor Power Dry system premiered in hockey bags, crossed over into motor sports, and will soon appear in other sporting categories.

SHOCK DOCTOR PowerDry System



Hampton Labs approached WhiteBoard with a new grill concept, a rudimentary prototype and unique product vision. The grill was Hampton's first product introduction and had no prior design reference. Hampton Labs requested WhiteBoard's full suite of program management and product development services.

After the initial assessment, a variety of manufacturing processes were chosen to give the grill its unique look and desired functionality. The WhiteBoard team fine-tuned the product specifications and refined the overall concept. From fabrication to assembly, everything from the lift assist mechanisms to the high gloss parts were fitted and tested. The final result: Hampton Labs introduced the fully functional aesthetic prototype fabricated by WhiteBoard at the 2008 Hearth, Patio, and Barbecue Association (HPBA) trade show in Atlanta. From print to production in six months!

Clients

We're proud to have collaborated with such a diverse range of partners!





WHITEBOARD^{*} INITIAL CONSULTATION FORM

Client: _____ Date: _____

Project: _____

- +

Cost R & D

Identify Solution

Distribution

Intellectual Property

Design Patent

Tooling

Merchandising

Relevance - User

Relevance - Distributor

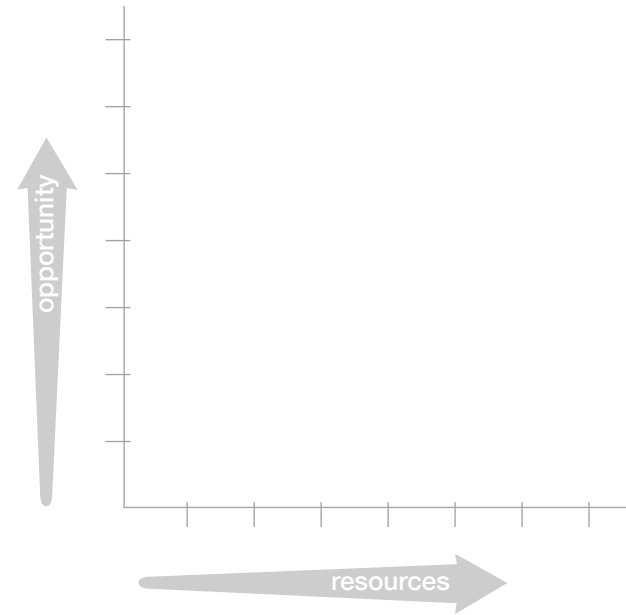
Relevance - Facility

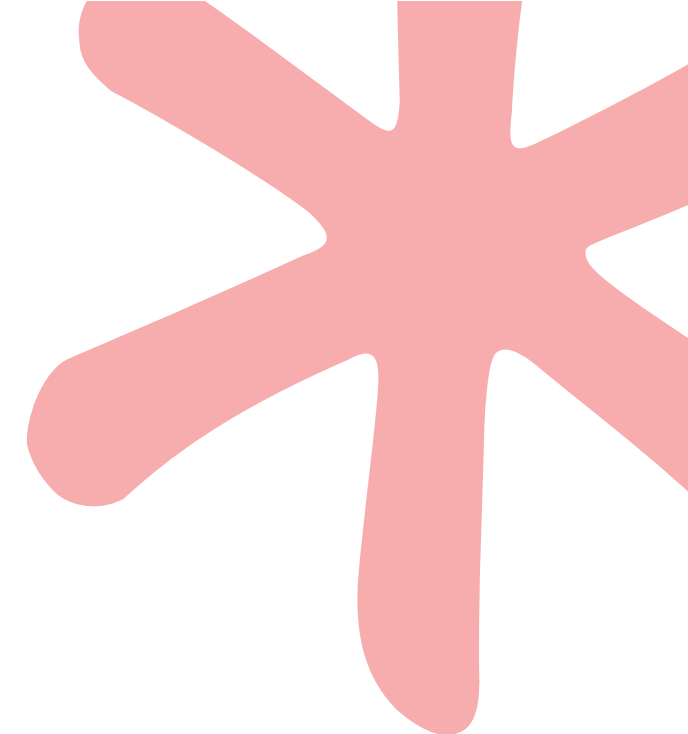
Resources

Sourcing

Validation Test

Projected Value





THANK YOU!

