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 **Helix**

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• Product Design

• Product Forecasting

• Engineering

• Prototyping

Communicating solutions visually...



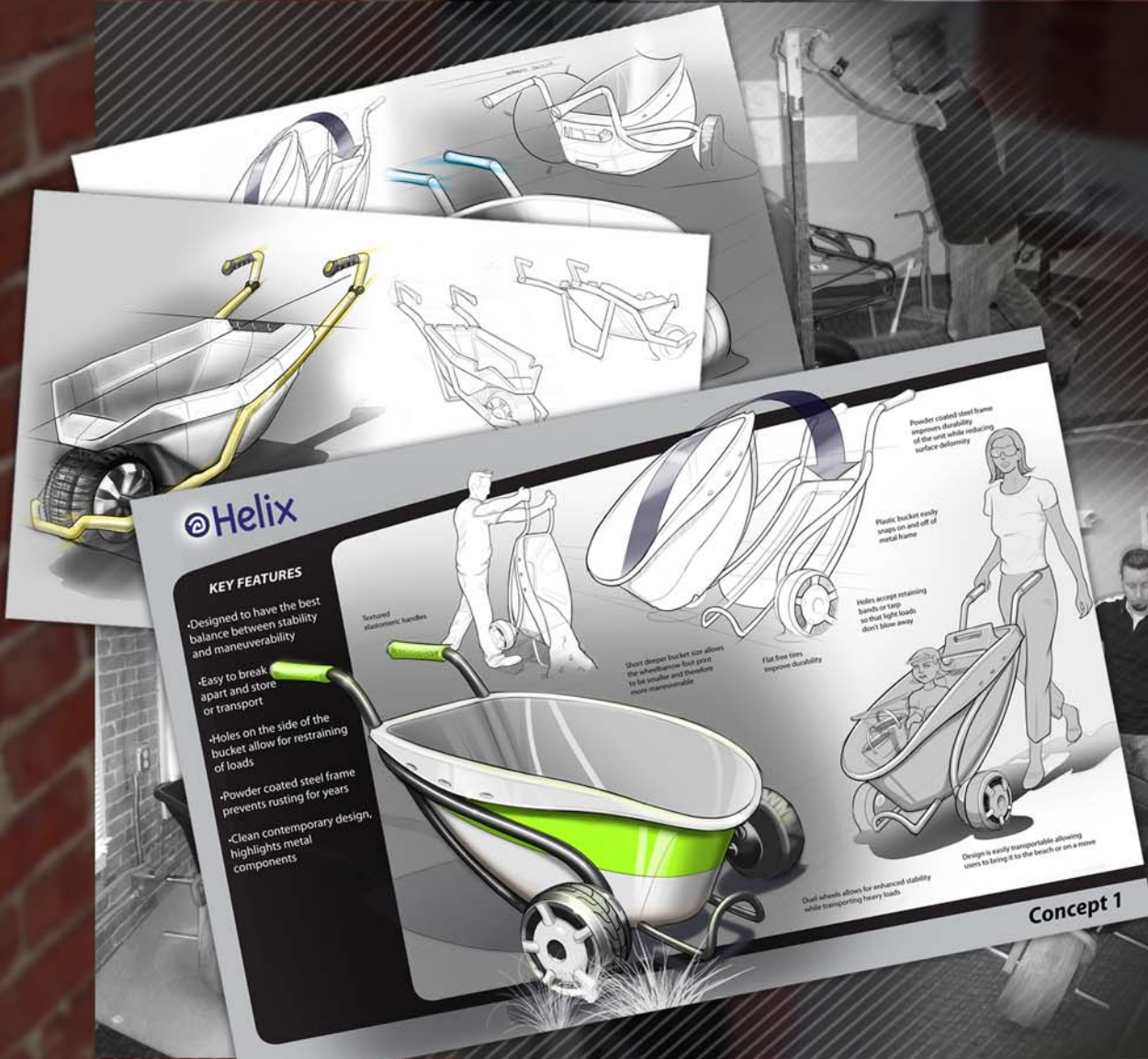
The Helix Design team continues to stay busy working on a number of tactical, industrial, and consumer-related projects with lengthy development cycles. That's good for our business, but "bad" for marketing, publicity, and writing Sneak Peeks! Nevertheless, our design team was recently asked to conceptualize more human-centered wheelbarrows using our HelixOne product forecasting process.

The wheelbarrow is thought to have been invented in ancient Greece circa 400 B.C. While the basic concept has been in use for millennium, its very age seems to have legitimized and made acceptable many inherent drawbacks in the design. They're bulky—which makes them challenging to stow and transport—and they're hard to control as load weight increases. Depending on the materials used, most current wheelbarrows ultimately rust, splinter, or breakdown and end up in landfills before being replaced by copies with the same shortcomings.

Using our HelixOne process, our designers gathered information about wheelbarrows, their users, and their uses. Through observation and user feedback we compiled lists of needs and uncovered several key opportunities for improvement. Our team then brainstormed ideas and concepts for overhauling the wheelbarrow and funneled them down into multiple product directions. After several rounds of ideation, our team chose the most intriguing design directions for further development and set out to confirm the merits of each concept through full-scale mock-ups and prototyping.

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...prototyping and refining what works



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KEY FEATURES

- Designed to have the best balance between stability and maneuverability
- Easy to break apart and store or transport
- Holes on the side of the bucket allow for restraining of loads
- Powder coated steel frame prevents rusting for years
- Clean contemporary design, highlights metal components



Textured elastomer handles

Shorter deeper bucket size allows the wheelbarrow to be smaller and therefore more maneuverable

Flat foot treads improve durability

Deep wheels allow for enhanced stability while transporting heavy loads

Powder coated steel frame improves durability of the unit while reducing surface deformation

Plastic bucket easily snaps on and off of metal frame

Holes accept retaining bands or straps so that light loads don't blow away

Design is easily transportable allowing users to bring it to the beach or on a move

Concept 1

Our concept directions successfully blended enhanced stability and maneuverability with storage and durability. One concept uses two wheels to improve stability, which also reduces the strength required to keep heavy loads stable. An integrated tool bin and removable bucket makes it easier to take apart, stow, and transport, or select other buckets tailored to a variety of applications. Another concept uses an oversized chamfered wheel to promote stability and enhance maneuverability. Our team gave its bucket a built-in pour spout for precise material dumping, and our designers devised hinged handles that allow the user to dump heavy loads without changing hand positions.

What's next for the next generation wheelbarrows? Our team will continue development through successive steps targeting detail issues and resolutions, industrial design refinement, product features, branding, performance testing of pre-production prototypes, and manufacturing realities for successful product launch.

The Helix Design team enjoys developing products for wildly diverse markets and industries. If you have needs or challenges in one or multiple areas of your product development process, please contact Troy Barber @ 603.836.0290 when you're ready to get started.

For more information on Helix please visit:

www.helixdesign.com

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