WHITE PAPER

Eight New Year's Resolutions for the Mid-Sized Manufacturer

by **Monty Montague**

Stage (Where)   Actor (Who)   Motivation (Why)   Direction (What+How)

Product Journey Steps
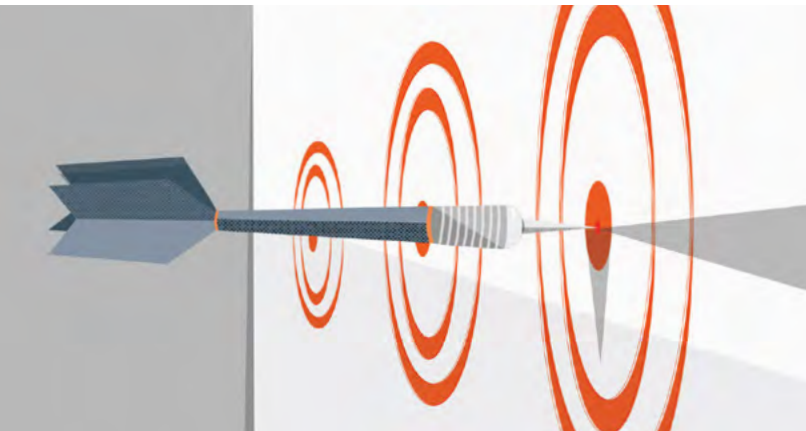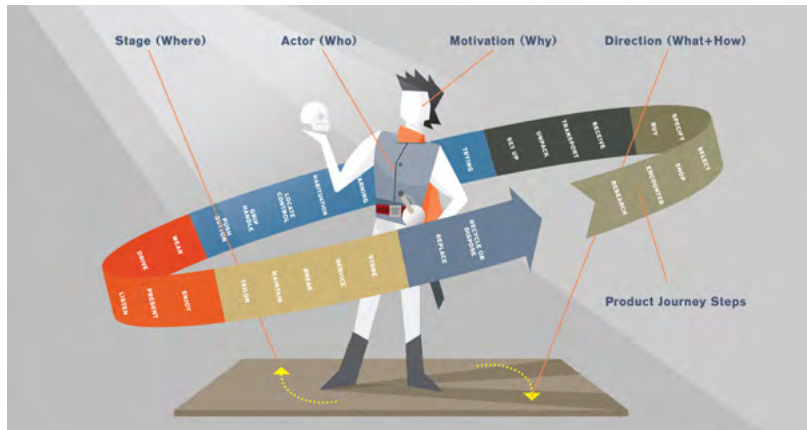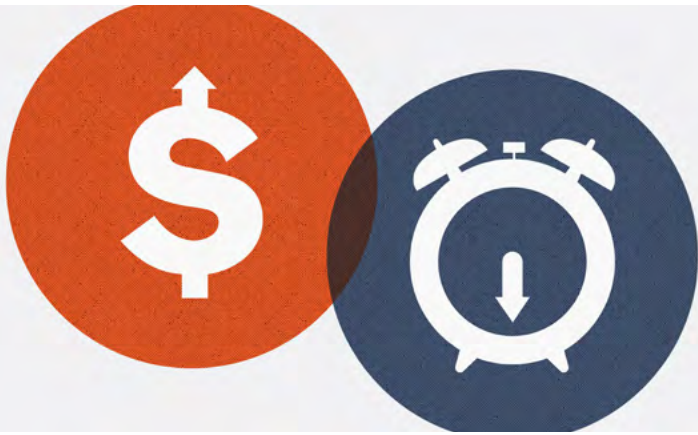
If you're looking for a competitive edge in 2017, you'll need to:

- Find out how manufacturers can use design to be stronger competitors next year.

- Learn how to reduce product cost while improving product design.

- Explore new materials and win design patents.

- Shape your design for Millennials and online retail.

- Achieve more valuable innovation, better ideas, and a deeper understanding of the customer experience.

Find your 2017 edge in these eight New Year's Resolutions for the Mid-Sized Manufacturer.

1. Be a Stronger Competitor
By Reducing Cost, Enhancing Design, and Winning Design Patents

If you see a competitor's innovation as a real threat, then consider several design approaches as part of your response.

Better Design and Lower Cost

If a competitive innovation involves a price cut, then lowering your price may be in order, but first consider design updates. Design refinements can be small, nuanced visual differences that communicate something new, or they can be deeper product design revisions that provide more value. Don't just race to the bottom of the price range. If you do, then you're only as good as your last price. Shoot for better design AND a better price—a powerful contender in any market. With a smart design strategy, a new design may have minimal impact on your cost of goods. In fact, a redesign can reduce cost while enhancing design. Effective design isn't just about adding the latest product feature or using a higher cost material. It's about considering your product in a whole new light. For the Perfect Flame family of gas grills, we reduced cost through selective use of materials, enhanced the pull-through with a consistent family look, and created a design that Newsweek Magazine called "a five burner beauty…perfect for avoiding BBQ envy."

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Design Patents

Work to achieve an original design that warrants a design patent. While utility patents were historically considered more valuable, the design patent has protected billions of dollars in market share for companies like Apple since it launched the iPhone in 2007 (the recent Samsung ruling, while limiting the payout to Apple, maintained that Samsung had infringed in key areas covered by the design patent). And for BOLTGROUP clients, most of whom are mid-sized manufacturers, design patents around our designs have created strong competitive barriers.

For more about reacting to competitor's innovations **click here**.
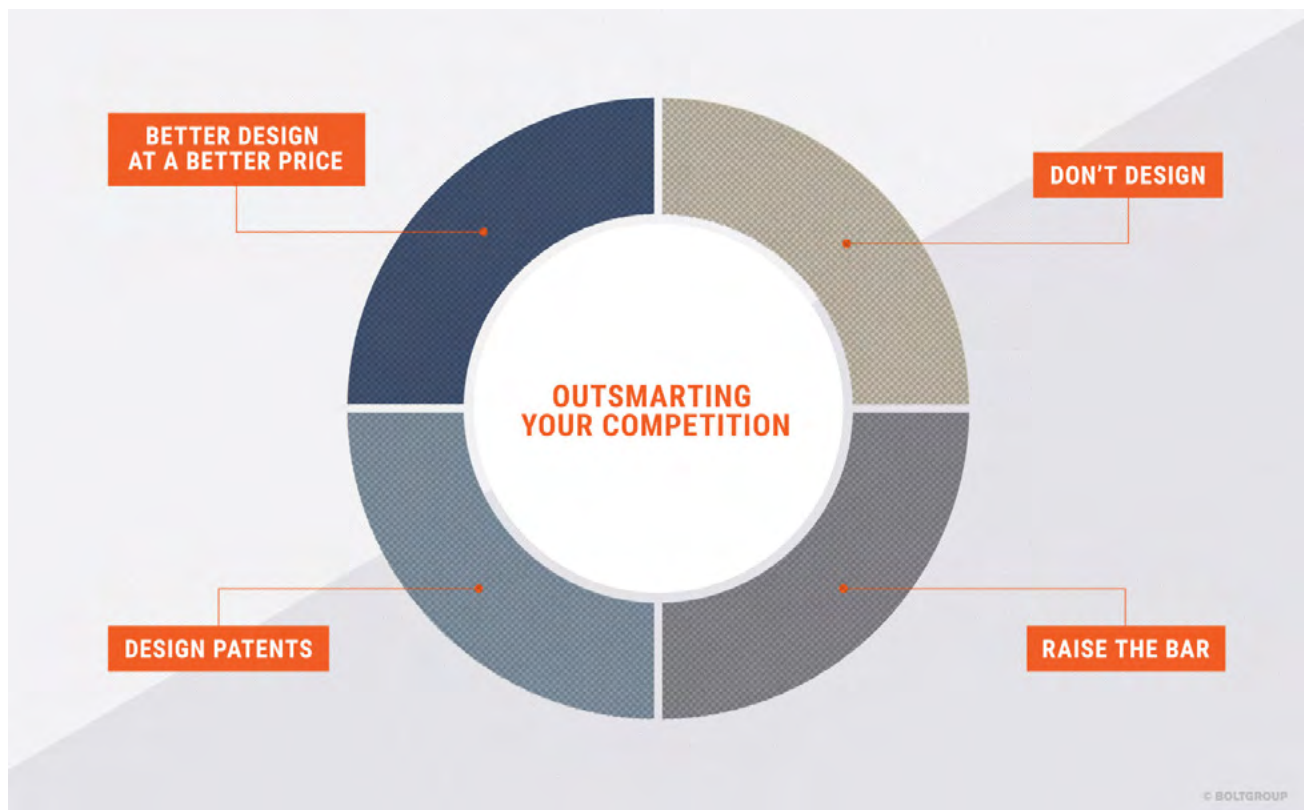
2. Beat the Big Guys
By Understanding Your End Users and Loving Them More Than Anyone

As a mid-sized manufacturer, you can do better than bigger competitors because you can love your end user more than they do! And with the right tools, processes, and experts, you can make your end users love you too. Rather than getting stuck on just innovation, cost cutting, or squeezing out the last drop of efficiency in your processes, get passionate about your end user. How?

Get to know who they are—intimately.

- Why do they behave the way they do?

- What motivates them?

- What are their values?

- Their concerns?

- What makes them happy and energized?

- What keeps them awake at night?

Spend time with them when they're using your products.

- Study them.

- Watch them.

- Video them.

- Talk to them.

- Analyze everything. Every detail. Every movement.

Product designers are trained to do this—so don't just listen to your sales people; send professional researchers, industrial designers, and design engineers.

But how can you do user research on a tight budget and schedule?

New methods have emerged that shorten timelines, reduce costs, and penetrate deeper into consumer thinking and behavior. Here are some examples: (For more examples see the links below).

Hold Maker Sessions

Recruit skilled users and enthusiasts of the products in your category for "maker sessions" with your design and engineering team. These sessions are very cost-effective and are part focus group, part observational research, part brainstorming, and part mock-up making.

Shadow Skilled Users

Recruit a small number of skilled users who will allow your design and engineering team to shadow them through a day in their life, with emphasis on their relationship with your category. Observe with an open mind and capture the day with videotape or photographs.

Videotape Everything (or have the end user do it for you!)

Video speeds up the insight gathering process in several ways. First, it captures the fleeting moments of user behavior so a larger team can easily analyze and uncover deeper insights. Second, it becomes the content for storytelling by the research team to the larger team. Don't have a team to shoot video? Then recruit users to shoot their own photos and video their experiences with your category. And have them keep written diaries to keep track of their activities and emotions interacting with your product category over a given time period.

Use Online Focus Groups and Bulletin Boards

The hefty cost and time associated with research is due in part to travel costs. Web-based focus groups can be assembled with participants from around the world without travel. With new focus group software, consumers can communicate online from their homes or offices, see the moderator, see images you want to share, and see each other—just like an in-person focus group.

Integrate the Design Team into the Research

To save time and money insist that the design team participate in the research along with professional researchers. This direct, firsthand understanding of the user leads to better solutions, faster, and with fewer costly errors, creating remarkable products that resonate with consumers.

Read more on cheap and fast methods of better product design through user research. // More on Loving Your Customer, **click here**.

3. Explore New Manufacturing Material and Processes

Work with Materials Partners (Not Just Suppliers)

Many go-to materials of today were exotic just yesterday. Rely on the experts to suggest new materials for innovative ideas. One example, Material ConneXion, is a resource center for materials of all types, providing inspiration, information, and samples in plastics, metals, composites, ceramics, and fabrics.

Here's a list of materials partners:

- Material ConneXion—product development materials

- Materials Council—architectural materials

- Granta Design—engineering materials

- ASM International—metals

Look Beyond Your Industry

Designers who work in various categories can cross-pollinate the process with materials from different industries. For example, medical device materials can be simplified and used in consumer products with innovative results. But you have to broaden your vision to capitalize on the next great thing. A report from the McKinsey Global Institute listed 12 hot trends that will produce disruption in our near future. One of the 12 was Advanced Materials—things like ultra-strength plastics and "self-healing" memory materials.

More ideas on exploring new materials.

4. Generate Better Ideas
Through Process, Preparation, and Diverse Professionals

So where do better ideas come from? In our experience there are four key ingredients: 1. Process. 2. Preparation. 3. Experienced Idea People. 4. Diverse Backgrounds.

1. **Find a proven Process to generate, collect, and manage ideas so the best can be identified and nurtured.** The best processes allow for fragile ideas to incubate during exploration and refinement, and then be combined with other concepts by the idea's champion. Management stewardship is critical. Judgment is controlled. And, by all means, remember to make it fun!

2. **Preparation.** Ideas come to the prepared mind. Better ideas come to participants when they come prepared in these ways:

   - Understand the needs and goals of the business.

   - Understand targets of opportunity "If we could do this, then..."

   - Understand trends in the industry, the consumer, and technologies. Conduct customer/consumer research.

3. **Experienced idea people generate better ideas.** Employ experienced industrial designers, design engineers, and industry experts.

4. **Lastly, include a diverse mix of backgrounds among your idea generators.** People of different cultures, ethnicities, genders, experiences, and professional training will add spice to your innovation soup. That's where new connections come from.

If you're looking for outside creative partners to add to your diversity, seek a design firm that has created products for a wide range of clients. Powerful problem solving teams will connect the dots between seemingly unrelated ideas, industries, and applications. Simply put, adding discordant experiences can create new harmonies. James Dyson forever changed the home cleaning market not because he was a veteran vacuum cleaner expert, but because his experiences with massive industrial cyclone towers gave him insight into the limitations of existing vacuum cleaners. It was his "non-industry experience" that provided the relevant spark to make his Dyson Vacuum disruptive.

Read More about Better Ideas. // External talent outside your internal comfort zone, **click here**.
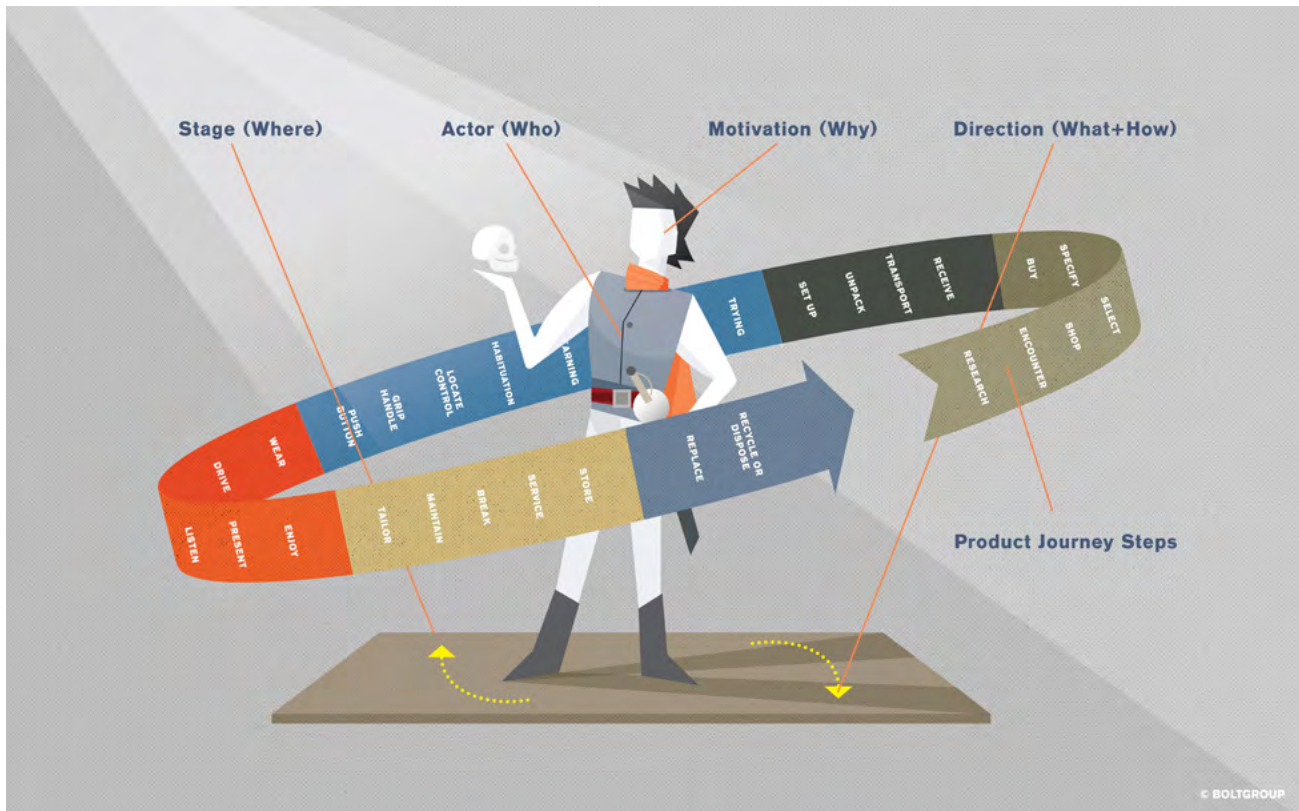
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Product Journey Steps

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5. Design the Complete User Experience

Similar to the way we experience an architectural environment, our experience with a product is a series of encounters, touch points, starts, and stops along a journey. The aesthetic, kinesthetic, tactile, intellectual, and emotional components of the experience all play a role. What's more, our experience is driven not only by the product, but also by our motivations, and by the brand we perceive surrounding the product. These motivations get at the essential "Why" of the customer journey.

Product designers can create positive user experiences by looking at a user's motivations—the needs, emotions, and feelings that drive a person to interact with a product. I use a vacuum not just to get dirt off the floor, but to impress someone, to feel better about myself, or to feel like I'm keeping my family healthy. We make a phone call to connect, share, learn, vent. We come to our morning smoothie blender worried about the day ahead, feeling like we need a healthier diet, but too rushed to cook something more. Examining the characters in the performance, their actions within the scene, and most importantly, their motivations, provides designers with guidance toward better user experiences.

THE PRODUCT EXPERIENCE JOURNEY STEPS

ACTIONS THOUGHTS FEELINGS

FIND AND BUY
Research
Encounter
Shop
Select
Specify
Buy

ACTIONS THOUGHTS FEELINGS

USE
PERSISTENT
Trying
Learning
Habituation

MOMENTARY
Locate Control
Grip Handle
Push Button, etc.

ACTIONS THOUGHTS FEELINGS

MAINTAIN AND REPAIR
Tailor
Maintain
Break
Service
Store

ACTIONS THOUGHTS FEELINGS

RECEIVE AND SET UP
Receive
Transport
Unpack
Set Up (Assembly, Installation, Activation)

ACTIONS THOUGHTS FEELINGS

OWN
Wear
Drive
Listen
Present
Enjoy

ACTIONS THOUGHTS FEELINGS

REPLACE
Replace
Recycle or Dispose

The Journey Map—Diagramming User Interactions

As product designers we seek to understand the user's objective behavior and their underlying motivations. For each interaction we consider the user's Actions, Thinking, and Feelings. Actions can be observed through research. Thinking and feelings can be inferred or sometimes learned through interviews. We also consider the journey through the purchase process so we can build visual cues into the product design that communicate the right messages at the point of sale. All of these interactions can be diagrammed on a Journey Map to help us examine and interpret the relationship between the user and the product.

More on product design and the customer experience.

6. Communicate the Character of Your Brand Through Product Design

How do you build a Visual Brand Language? Ask yourself these questions:

1. Does the look and feel of your products communicate what's best about your brand?

2. Do your products look like they all share the same brand?

3. Would I recognize the brand of your products if I took the logos off?

If you answered yes to all three, then your products have a "Visual Brand Language." If you didn't, well … read on.

A Visual Brand Language, or VBL, is a framework for product design used to create a cohesive product family. With an effective and consistent VBL, the look and feel of your products will communicate what's great about your brand in the most direct way possible. Your customers will recognize your products. Your design team will also be able to innovate more efficiently, because they'll be armed with a set of Signature Design Elements and Principles—tools to design the next product for your brand. See more in our post: **"Nine Steps to a Great VBL"** for your product family.

7. Test Your Design Ideas
But Don't Squelch Your Innovation

The history of new product development is filled with examples where prototype tests with users failed. The Herman Miller Aeron chair, the most successful office chair ever made, was described as "looking like an alien" in early testing because of its radical new design and use of new materials. The company killed it, only to revive the design later to phenomenal success. Product validation research must be well designed and rigorously executed to give valid direction without putting the kibosh on valuable innovation. But even before the research methodology is defined, other critical pieces must be in place.

First you need a thorough understanding of the product's target user—their needs and expectations around the category. If you get this wrong, the validation research findings will be misleading. Defining and understanding the target user often requires its own research at the beginning of the product development process. It may include both quantitative research, such as a segmentation study, and qualitative methodologies, such as ethnography.

Second, you'll need well-defined research objectives that determine what must be measured. These metrics are based on the design criteria—what the product must provide to meet customer needs

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and expectations. This can be especially difficult when a new product category or radically changed category is created. Think Steve Jobs. Or the Aeron chair.

Having these pieces in place often requires research at the beginning and throughout the development process.

More about **testing your products the right way**.
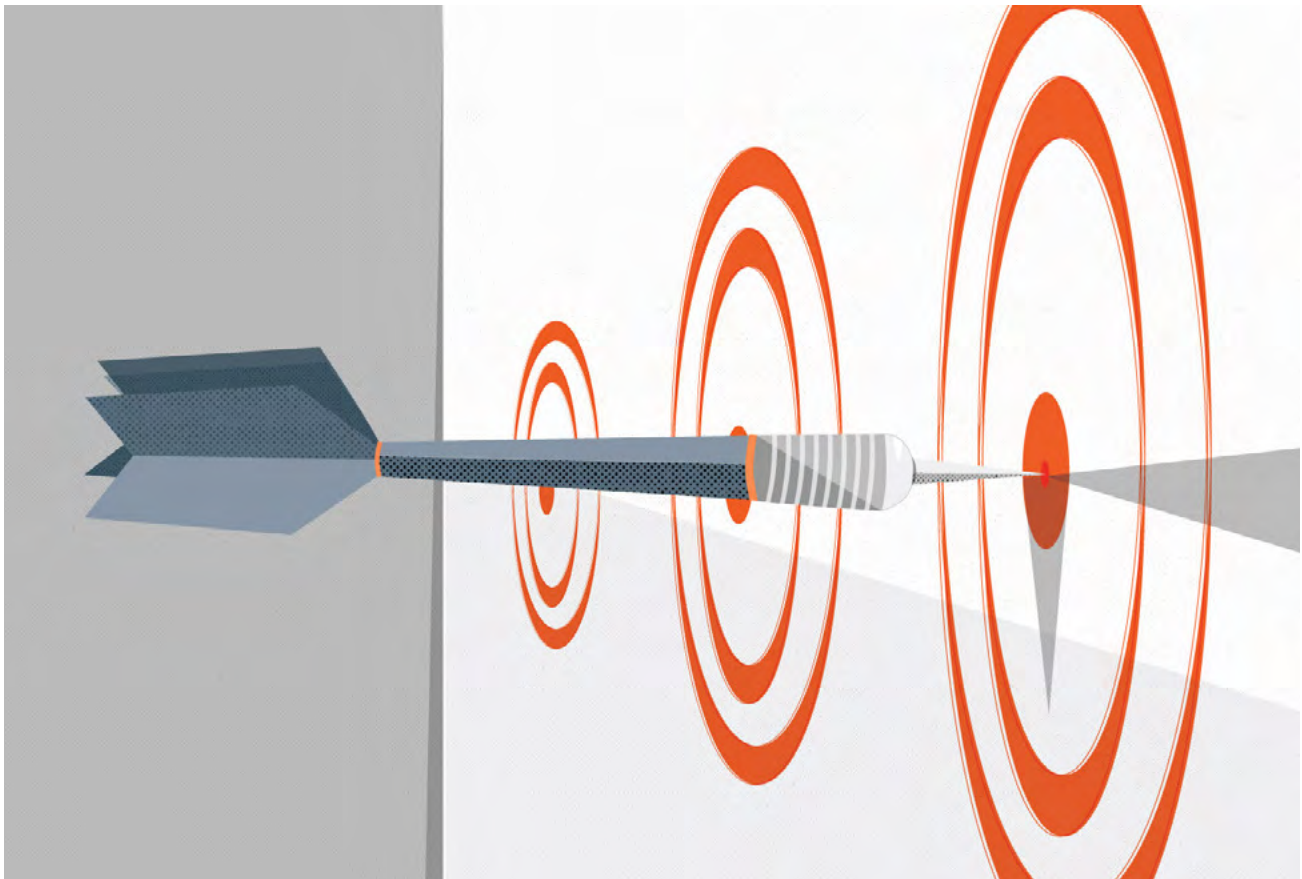
8. Be Ready for the Next Wave
Through Product Design for Amazon, Bitcoin, and Millennials

Speaking of customer journeys…let's talk about Amazon. Online retailers have changed the product purchase journey. All product design needs to keep up or perish. Many manufacturers feel like online retailers have hijacked their sales channel. They are losing control of their brand, their pricing, and even the online photographs of their products.

92% of Millenials shop with mobile phones. I believe Millennials will adopt new Blockchain based purchase applications because they're fast, seamless, and transparent—attributes Millennials look for. And Millennials are generally open to personal data being collected for tailored product advertising. So our future includes direct mobile marketing to individuals, followed by Blockchain-based purchases.

Control of buying and selling will continue to slip away from manufacturers. And Millennials' tremendous buying power will drive market changes. But one thing manufacturers can control is design. Here's what designers, engineers, and manufacturers can do to leverage this next wave:

Design Everything

- Product design can no longer afford to have a "good side" and a "bad side." When someone else selects the marketing photograph, every side has to be a good side.

- The same goes for the inside. Every part that a person touches (including service people) must be designed.

- Your product design should contain visual cues that communicate obvious brand messages—visible even on third-party websites.

(See more ideas via the link to our full post below).

Make it Worthy (and Transparent)

Millennials seek to be part of worthy causes, and they care about how a product is made and its impact on people and the environment. In fact, 90% of U.S. consumers say they would switch brands to one associated with a cause, given comparable price and quality.And 66% of consumers globally are willing to pay more for sustainable goods.While sales channels change, only you own your product design, your brand, and your business practices. So share them with consumers in an open, authentic way. Show images of your process, your sources, and your design ideas…retailers can't do that, only you can. Explain why you make the decisions you make. Ask consumers about new product ideas and improvements to current product lines.

More about product design for online sales, Millennials, Blockchain, and Bitcoin. // **Learn how** to use design to win the "Online Review Game."

Happy 2017. ∎

MEET MONTY

As co-founder of BOLTGROUP, Monty Montague has worked with hundreds of clients in wide-ranging industries, including Fortune 500s like GE Lighting and Herman Miller. His name is listed on over 30 patents, and he has received the highest international design awards, including four Gold IDEA Awards, ID, iF, and MDEA Gold Awards.