Inclusive Product Design

DBP Research Report
Inclusive design is a repeatable, human-centered approach to problem solving and innovation that takes inspiration from real people and real problems. The process entails constantly questioning bias and world views, and bringing a range of diverse perspectives into the conversation.

Inclusive design starts with an inclusive team. Collaboration and sharing a wide range of disparate views is critical to creating a complete picture of a problem or need, and developing solutions that meet the needs of the many versus the few.

Inclusive design means involving the largest diversity of people in the design process and getting feedback from as many consumers and end users as possible. It is important to ensure design test subjects don’t have the same background or interests as design creators.

Inclusive design solutions are relevant and work for all, not just the communities that benefit today. This requires a close examination of assumptions about consumers and end users, and identifying stereotypes that can influence and limit design. For example, does the target user represent a particular age or gender, or is that a biased stereotype the design is reinforcing?

Inclusive design can only truly succeed in a organizational culture that recognizes and rewards shared ownership of ideas, not just individual accomplishments.
Homogeneous teams, whose members come from the same country, are of the same age, have graduated from the same schools, and who share the same world view, will produce homogeneous solutions.

Inclusive teams comprised of a wide array of perspectives and experiences elevate problem-solving and reduce bias and stereotypes. Diverse perspectives ensure the design team explores multiple solutions and varied angles on how to tackle the same problem.

Tip: Make sure diverse perspectives are at the table, but be careful that preconceived notions about who the consumer or end user is don’t limit project scope or misinform the diversity dimensions of the design team.

• It’s not enough to build a diverse and inclusive workforce if companies don’t put that talent to use to curate a diverse point of view.
By creating the Pro Hijab, Nike sends an important message about inclusion and encourages a generation of Muslim girls to think of themselves as athletes.

Designers in Nike’s headquarters tackled the challenge of creating a high-performance ‘Pro Hijab’ that would make it easier for millions of Muslim women to participate in sports. The project was both contentious and highly supported, but one that Nike drove relentlessly to production. Brand ambassadors for the Hijab include figure skater Zahra Lari and triathlete Manal Rostom. The product came on the heels of a surge in spending in the Middle-East which drove new marketing strategies and advertisement spending by international brands.

Amna Al Haddad, the Dubai-based weightlifter who inspired Nike to create the hijab, believes that the 800 million Muslim women around the world are no longer invisible as consumers. It was encouraging to her that large American apparel brands like Nike don’t see hijab-clad women as foreign or strange, but as valuable customers. “There’s a change happening in the world,” Al Haddad says. “You can see it when a big brand like Nike creates a sports hijab.”
Lush received a huge wave of support for their Valentines Day ad-campaign featuring two gay couples taking bubble baths. The normalization and ease with which the couples are portrayed in the ad is perhaps the reason the campaign has garnered so much praise.

LGBTQ communities have been vocal in the past by ‘token’ inclusion of the LGBTQ community in advertisements. However, the couples featured in the Lush campaign are not only integral to marketing the product, they also comprise some of the most humorous and wholesome moments in the advertisement, and refute any ‘tokenistic’ sentiment.

Source: Swaay
Mammography has been proven to reduce mortality by 20 percent, yet as many as 40 percent of women in Europe and 30 percent in the US don’t get screened because of anxiety about results and discomfort associated with the exam itself.

A team of female engineers, designers, and managers at GE Healthcare set out to design, build and manufacture a mammography machine that would humanize the examination process and technology, and encourage more women to get screened. The team gathered insight from over 1,200 doctors, technicians, clinics, and patients; they also invited groups of women to test various prototypes of the machine to further elevate the design concept.

Many elements of the existing technology were reassessed in the effort and incorporated in the design for the new Pristina mammography machine. Handles women had to grasp in the older design were replaced with arm rests, which reduced patient anxiety and allowed them to relax, which in turn contributed to a more accurate read for physicians because women were no longer tensing up and flexing their pectorals by grasping the handles. The redesign also includes a new remote control so women can compress their breast with the aid of a technician, a first in the industry. The main pillar of the machine, which holds the X-ray source, features flowing, overlapping plastic folds meant to symbolize a shawl — an intentional design element to confer empathy. Its concave shape allows patients to rest their head against it, further fostering relaxation. The latest design for the scanner offers an option for hospitals to hide the support structure in a wall to better blend with the surroundings.

Pristina is now available in most parts of the world. Product assembly time was cut in half and the number of women getting screened is expected to increase.

Source: GE Healthcare
Target’s Black History Month assortment puts a spotlight on the heritage, legacy and impact of the Black community. Now in its fifth year, the collection is available in hundreds of stores across the country and online, and includes more than 100 items for $29.99 or less. Target is also shining a spotlight on products from black-owned businesses that are carried in our stores year-round. One-third of the Black History Month products are from Black-owned businesses, including Lip Bar and Alikay Naturals, and more than half are exclusive to Target. This year’s Black History Month marketing campaign, Black Beyond Measure, also features Black entrepreneurs and Target team members. The campaign name was designed to amplify success stories and celebrate blackness, an uplifting sentiment to empower future generations.

Target’s African American Business Council (AABC), which includes more than 1,000 team members, was the driving force behind creating the assortment five years ago and continues to advise our teams on the collection. The team spent months creating meaningful events at our Minneapolis headquarters to help educate and engage team members, as well as celebrate our vendors.

Source: BlackEnterprise
In 2018, Gap launched The Color Proud Council, the company’s first product inclusion initiative, with the mission of bringing diversity to the bottom line of the business by improving product education and pipeline, as well as talent acquisition and retention.

Color Proud works hand in hand with Gap leadership and key employees to address inclusivity on all fronts — through tackling bias in the way designs are sketched to the creation of actual products in stores.

Separate from the company-sponsored employee resource groups or the D&I team, the council’s first order of business came to life in Banana Republic’s True Hues Line, a collection of nude undergarments and shoes that better represent a range of skin tones, which drove sales by 21%, proving a need for continued diversity and inclusion within the fashion industry.

Source: Forbes
With 34 chapters across the nation and more than 13,000 members, Bank of America’s Hispanic-Latino Organization for Leadership & Advancement (HOLA) has a proven track record driving sustainable business growth while strengthening the company brand through community engagement.

The ERG draws on the insights of its members with cultural ties to the Hispanic-Latino market to help inform the company’s marketing, customer relations and sales personnel connect with customers and business partners in those markets.

With 30 percent of new checking account clients identifying as Hispanic/Latino, HOLA has advocated for more resources to be available in Spanish. As a result, the Bank of America mobile banking app is now available in Spanish with more than 1.3M active users.

HOLA members have engaged clients and promoted the benefits of the mobile app among clients, resulting in a 33 percent year-over-year increase in 2017 alone. Additionally, the bank’s financial literacy site, bettermoneyhabits.com is now available in Spanish. HOLA members are helping to improve financial literacy both with clients and during community events. These efforts have resulted in clients spending 2.5 more minutes on the site and viewing more pages per session as compared to the English site.
In its “Bridging the Gap”, iconic American brand Gap is celebrating diversity and championing optimism through a lighthearted song and dance, directed and styled by British Vogue editor-in-chief Edward Enninful. And he recruited an incredibly diverse 14-person cast of celebrities and models, all of whom he feels embody American culture today, to help drive home the message.

The campaign stars Adwoa Aboah, Maria Borges, Christie Brinkley, Miles Chamley-Watson, Priyanka Chopra, Jonathan Groff, Wiz Khalifa, Fernanda Ly, Casil Mcarthur, Lineisy Montero, Ellen Rosa, Jasmine Sanders, Yara Shahidi, and Alek Wek. And they all came together to sing the 1976 song “Sunny” by Boney M. as a united front, with each wearing Gap’s iconic white tee, styling it to reflect their individuality.

The project is about authenticity and people living their truths.

Source: glamour
A new line of dolls called Queens of Africa is competing with Mattel’s Barbie in Nigeria, Africa’s most populous country.

The dolls were intentionally designed to promote positive self-identity and independence among young African girls, and align with Nigeria’s three largest populations: Nneko is Igbo, Wuraola is Yoruba, and Azeezah is Hausa. Not only do the dolls give young girls a representation of ethnic nuance and diversity, they also come pre-packaged with a female-forward social agenda — the company’s website features the trio holding a sign printed with the phrase #BringBackOurGirls.

It's a great moment for more inclusive dolls, especially since the last few years have shown Mattel’s Barbie struggling to keep up with the times. The company’s first launch of a black Barbie met with criticism from black communities for her ‘hip-hop’ styling. Computer Engineer Barbie came with a storybook in which Barbie needs the boys to help her turn her idea into a real game, and Mexican Barbie came complete with Chihuahua and passport. By comparison, Queens of Africa each come with an origin-story style book that honors heritage, promotes education, and emphasizes ethical behavior.

The brand has already captured a larger market share in Nigeria than Mattel, and the company reports orders from the US and abroad are steadily increasing.

Source: Refinery29
At L’Oreal, one employee’s side project to develop a richer line of foundation has led to a company-wide campaign to break color barriers.

L’Oréal chemist Balanda Atis heads the company’s Women of Color Lab, which is tasked with formulating groundbreaking products for multicultural women, including foundations, lipsticks, and eye makeup. In 2006, L’Oréal’s R&D team presented the company with new foundations that were meant to be a breakthrough for women of color. When Atis tried them, though, she still could not find a match for herself; the shades simply did not run dark enough. She told the head of L’Oréal’s makeup division that its new range fell short, and was met with a challenge: If you think it’s fixable, let’s see what you can do. For several years, Atis’s team crisscrossed the country, using special probes that measure light absorption to evaluate women’s skin tones. Back at the lab, her design team used this information and reams of other input from women of color to create prototype shades.

When Atis presented her research to L’Oréal’s top brass, they pulled her onto the task full-time and eventually leveraged her work to create more than 30 new shades across L’Oréal’s brands, from the mass-market Maybelline to the upscale Lancôme. “What Balanda started is still changing the game today,” says Malena Higuera, senior vice president of marketing at L’Oréal Paris. “We’re using these innovations to build first-to-market breakthroughs.”
Planned Parenthood launched its first digital product - **Spot On** – a free period- and birth-control-tracking app that’s been downloaded more than one million times since its debut in 2016.

The digital product design team understood that most fertility tracking apps focus on people trying to get pregnant, yet the average woman will spend approximately 30 years of her life trying not to get pregnant. It was this concept that was at the core of the design process.

Because the organization is committed to providing nonjudgmental, personalized care, Spot On designers also wanted to make sure the app design, copy, and emojis reflected that commitment. They intentionally designed the app to be gender neutral and usable for people regardless of their sexual orientation or gender identify. Feedback from users praise that the design is not pink.
In China, parents are nervous about sports that the possibility their children will get hurt. To disarm those concerns, Nike created the new Badge of Honor brand of bandages, specially designed for basketball, running, football and skateboarding. The bandages are free with the purchase of youth athlete products.

The bandages are packaged in sleeves that unfold into comic strips telling fictional stories of young athletes who gave it their all, got hurt and then got back into the game. The comic book messages of inspiration have a corresponding YouTube film to reinforce the ‘just do it’ brand.

The design creates a forum for connecting with kids who live in a very careful culture, and providing them encouragement to keep at it and do their best. By offering these bandages, Nike admits that in sports there are risks of physical injury. But the message that carries is that if you get hurt, brush yourself off and get back in the game – ‘just do it.’ Since the parents are likely the ones applying the bandages, they get the message, too.

This little idea has big implications. It’s a service, a message and a completely new medium with which to communicate with consumers.
Over time, reference standards for crash safety testing have become more inclusive, and gendered innovations have led to the development of pregnant crash test dummies that enhance safety precautions for women in automobile testing and design. While developing anthropomorphic dummies, researchers noted that women's normal seated position differed from what was defined as the standard seating position. Women on average tend to sit closer to the steering wheel to compensate for shorter stature, which puts them at greater risk for internal injury in frontal collisions.

The notion that persons of small stature are out-of-position drivers implies that the problem is the smaller-than-the-norm driver. In fact, the problem resides in the technologies (i.e. car seats and settings) that have not been proportioned to take the safety of all drivers into consideration.

With over 13 million women pregnant across the EU and US each year, the use of seatbelts during pregnancy is a major safety concern. However, conventional seatbelts do not fit pregnant women properly, and motor vehicle crashes are the leading cause of fetal death related to maternal trauma.

Test dummies were first developed for the US Air Force in 1949. Women were excluded from major combat roles in the armed forces at this time, so the male body was given priority in the design of military safety technologies. This bias, however, was not corrected when test dummies were originally developed for civilian use which left other segments of the population out of the safety design.

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Mini Accessibility Jams are recurring one-day design events in Pamplona, Spain, conducted with the goal of increasing awareness around accessibility and generating best thought design solutions.

The first Jam event brought together designers and end users – in this case, individuals with disabilities - to brainstorm and problem-solve around three accessibility challenges. Participants were divided into creative teams that included professionals from the design industry and individuals with disabilities with varying accessibility needs. Solutions generated by the teams were evaluated by experts from different industries for their potential impact and development feasibility.

The event also offered presentations and workshops conducted by experts in best practice accessibility design, 3D modeling, and robotics.

Source: DesignForAll
Nestlé is one of the first food and beverage companies to adopt inclusive design concepts to ensure that products and packaging meet the needs of all consumers, regardless of age or health conditions. The company conducts market research and gathers external feedback to develop a more comprehensive understanding of the challenges individuals may experience opening Nestle packaging. As one example, a study by one Nestle design team found that the packaging used for Black Magic chocolates presented barriers for one million consumers.

Among the exercises Nestle design teams employ are gloves which replicate the impact arthritis has on dexterity, and goggles which replicate blurred vision, as well as goggles to make it difficult to see different shades of color. Once barriers are identified, design teams create solutions to overcome them, test new prototypes, and redesign the products and/or packaging so ensure access for all consumers.

The company hosts continuous workshops to ensure all brand and design teams across Nestlé incorporate inclusive design goals in product development.
EVA Facial Mouse is a free app promoted by Vodafone Spain Foundation and developed by CREA Software Systems. EVA is intended for end users who cannot use a touchscreen: individuals with amputations, cerebral palsy, spinal cord injury, muscular dystrophy, multiple sclerosis, amyotrophic lateral sclerosis or other disabilities may benefit from the app.

The app provides an interaction channel that allows users to control an Android device by tracking the face. Based on the movement of the face captured through the front camera, the app allows the user to control a pointer on the screen (i.e., like a mouse), which provides direct access to most elements of the user interface.

For many individuals with disabilities, the app marks the difference between being able to use a mobile device or not, and consequently the access mobile devices provide to social and economic independence.
Carol Meyer was a senior vice president and private investment portfolio manager at Merrill Lynch when she was asked to serve on the company’s diversity council. Two of the council members were openly gay, and for the first time Meyer really understood the challenges and barriers LGBTQ investors face.

Meyers shifted her specialty focus to designing products for investors who don’t fit into traditional roles. In her new role, she worked closely with community members to understand the unique challenges LGBTQ individuals and couples face.

Meyers then drew upon the expertise of various divisions of Merrill Lynch to design programs and products that protect partners and benefits, minimize taxation, help with retirement, and ensure LGBTQ clients have equitable investment options that benefit their unique situation.

Carol Meyers led the Merrill initiative to design products for LGBTQ investors.
Literacy gaps create a barrier to financial inclusion in many developing countries. ATMs, for example, require a basic ability to read and understand numbers and text, rendering them inaccessible to illiterate groups. Being illiterate is not limited to not being able to read; it also impacts the individual’s ability to deal with abstraction and use language in general. In a project in Pakistan, Continuum Research validated that systems that should work in theory break down when disadvantaged communities are unable to learn how to use them, or don’t understand their rights or how to obtain recourse if there are problems.

Unfortunately, debit cards are issued with written instructions. In the research, none of the women participating understood those instructions. Many of the design participants could read English numbers and understood what they represented, but few were able to interact with the system using numbers.

Because systems are designed for users, the onus was on the design team to ensure users can access the system. Through an inclusive design process, the tech-designers detailed access barriers, and through the active involvement of end users, created more informed design solutions. For example, providing simple icons and verbal instructions as alternatives to text and numbers in ATMs represented an important innovation.

Source: Gendered innovation
Nearly one billion people worldwide lack reliable access to water. In sub-Saharan Africa, water-fetching is women’s work, and when villages lack water infrastructure, women and girls spend some 40 billion hours annually procuring water.

Because of this gendered division of labor, many women have detailed knowledge of soils and the water they yield - knowledge that is vital to civil engineers in making decisions about where to place wells and water taps. However, UN studies found that many water infrastructure projects fail because women are excluded from decision-making and their knowledge literally, is untapped.

Infrastructure design projects that engage women have produced significant gains in the quality of water infrastructure and improved the efficiency of water projects. Projects in which women are trained to maintain and repair water infrastructure and in which women contribute their knowledge have been highly successful in increasing the reliability of improved water sources.

Better access to water for all consequently improves access to education for girls, access of adult women to income generating activities, and contributes to economic sustainability and gains in reducing the cycle of poverty.

Source: GenderedInnovation
The RAIC international prize for architecture is awarded every two years for a single work of architecture judged to be ‘transformative within its societal context and expressive of the humanistic values of justice, respect, equality and inclusiveness.’ The 2017 award went to Tezuka Architects for their design of a kindergarten in Tokyo.

The design took an inclusive view of school settings. There is no hierarchy in the design; teachers and students all have an equal status architecturally, which is a direct result of the form and inclusive way the building was designed. The one-story, oval-shaped facility can accommodate more than 600 children and was designed with an elliptical open-air roof, with classrooms, offices, and support spaces below. According to a spokesperson for Tezuka: “We want the students schooled here to grow into people who do not exclude anything or anyone. The key was to design spaces as very open environments with the vision that when boundaries disappear, constraints disappear.”
Public transportation systems that are designed to capture the travel related to child-care, elder-care, and basic household management needs create more efficient systems.

Traditionally, civil engineers engaged in designing public transportation systems have focused on travel categories including employment, education, shopping, and leisure. These assumptions have excluded the travel needs of many segments of society, including women who work. None of the traditional categories capture caring for children, the elderly, or managing households.

Women (and men) who travel for work plus caring related activities have unique travel patterns: they may travel from home to daycare and on to work. Leaving work, they may stop at the food market, the dry cleaners, and daycare before returning home.

When ‘caring work’ was included as a travel category, it became the second most important design element, and a priority consideration in designing public transportation travel routes.
There is a danger in designing products with a perceived majority of users in mind.

As an example of technology that wasn’t programmed for diversity, a New Zealand online system didn’t recognize the passport photo of a Chinese because the software interpreted the subject’s eyes as closed.

Another example is Amazon’s Alexa. For users that don’t have English as a first language, accents can make commands unrecognizable. The conversational interface was programmed with unconscious biases, assuming that all end users will speak and sound the same.

Inclusive design is about highlighting differences, not hiding them.

Source: R/GA