DESIGN FOR LONGEVITY

CREATED BY REDRESS
WHY SHOULD YOU LEARN ABOUT DESIGN FOR LONGEVITY?

As a designer, you have worked to develop your garment construction and collection concept skills, but one of the most important elements in the design process is to assess how your decisions impact the garment's use from a holistic perspective. Taking the time to understand the needs and desires of the consumer during the use stage for clothing can potentially extend the life of a garment significantly and thus reduce environmental impacts beyond the purchase point. These considerations as to how to extend the active life of clothing are critical to the design process and will help you prepare for your career in the fashion industry.

WHAT DOES LONGEVITY IN DESIGN MEAN?

Everything that is produced has a lifecycle and both you and the garment's user play a critical role in determining its longevity. Longevity is the timespan over which the item remains relevant and useful. You should consider that not only does the item change physically with age, but also that its function can change over time.

The current linear model of production and consumption for fashion and textiles can be extremely wasteful and often results in numerous negative environmental impacts. When considering how to design garments that withstand the test of time, it is critical for you to consider the circular system of production and usage, which often presents unique design challenges.
WHAT DOES LONGEVITY IN DESIGN MEAN?

Of course, whilst you cannot control how long the owner uses a garment for, you can work backwards to understand the reasons why people discard garments and what you can do as a designer to mitigate these reasons as far as possible. This problem solving approach to design can result in the creation of a garment that has the best chance of long-term use. Extending the active life of half of all UK clothing by 9 months would decrease the UK’s carbon footprint by 8%, water footprint by 10% and textile waste footprint by 4%, per tonne of clothing.

Designing clothing with the intention for it to withstand time is an important step to ensure physical longevity. However, it does not automatically mean that clothes will remain in the fashion loop for longer. This also depends on how the user cares for or customises the item and its function for them. The Local Wisdom project (-founded in 2009), is a great resource example as it depicts the variety of ways in which people use clothes. It also explores interesting use practices and how garments evolve past the design stage once they reach their owner. Through adaptation for changing needs, Local Wisdom shows the users power to control the lifespan of a garment.

Extending the longevity of clothing from a psychological perspective can be more complicated to tackle. This is because a user’s attachment to the item may be influenced by external forces such as the relevance of the garment’s style within the owner’s peer group, as well as internal memories connected to the garment. In this case, garments act as an external visual cue to represent the user’s identity and/or opinions. British designer and activist, Vivienne Westwood, is known for using provocative political messages which resonate with her customers values and act as a call to challenge current issues - including climate change. Incorporating and promoting longevity in your garments with a clear voice and vision like Westwood can help you to cultivate strong relationships with your customers.

As mentioned about the Local Wisdom project, “We value the expert’s touch honed over years of training and a process of constant refinement of technique necessary to create superior pieces. But makers don’t have a monopoly on quality craft practices. For there is also craft involved of using garments well.”

As an environmental activist, Vivienne Westwood advocates “Buy less. Choose well. Make it last. Quality, not quantity.”
HOW TO MAKE LONG-LASTING CLOTHES?

Making long lasting clothing refers to the physical longevity which can include the garment’s construction and the fabric’s fibre blend, as well as its colour fastness and resistance to abrasion, odours and stains.

1 DURABILITY & QUALITY

First let’s consider the physical durability and quality of a garment. Your decisions at the design stage will directly influence how the garment withstands the test of time in terms of the quality of its construction and how it will hold up to the intended function. There are many aspects which can be considered within this scope, starting with the choice of materials used to create the textile itself. All fibres have individual properties (this has already been discussed in Topic 5: Sustainability in Fibres), for example, natural fibres are traditionally preferred for their comfort in comparison to man-made fibres. Synthetic fibres on the other hand, carry benefits of physical durability in strength and are easy to care for due to their wrinkle resistant properties.

Garment construction also plays a role in physical durability, for example selecting the correct stitch can enforce seams for longer lasting use. The method of dyeing textiles is important when a user is deciding whether to keep a garment, which can help or hinder its longevity. Garments with colour fading may be considered damaged and therefore be discarded earlier - or conversely this could add to the character of the item. Treatments and special finishes can improve the feel, performance and appearance of the fabric, which can extend the active use of a garment. To ensure all of the above elements are correctly applied, it is recommended that garments are tested to assess their physical qualities in order to ensure they will perform adequately for their purpose and hold up over time.

Childrenswear brand Victornee was founded with consideration of how the user will use the garment in order to ensure durability of a garment. For children between the ages of four and twelve years old, running and playing involve a lot of falling and a common issue is torn trousers at the knee. All trouser styles from Victornee are unisex and feature multi-layer reinforced knees achieved by quilting layers of durable fabrics together. The result is sporty and stylish trousers which can withstand the active playtime of their users.

The Higg Materials Sustainability Index (MSI) is a helpful tool to find the best material which takes both the environment and quality into account. This tool is used by brands to rank the environmental impact of fibres based on seven key impact categories including climate change, water resources, human toxicity, ecotoxicity and eutrophication. The website has a public facing version to help public users better understand the environmental impacts of fibres.
No Harmful Chemicals.  
No Underpaid Labors.  
No Exploited Farmers.  
100% Ethical.

Cosmos Studio the sustainable shirt produced with chemicals which are OEKO-TEX® Standard 100 certified and up to REACH standard.

EXPERT’S TIP

— Jeffrey Man and Davy Chan, Co-Creators of Cosmos Studio, a Hong Kong based fashion and lifestyle brand —

“The durability of a piece of clothing is undermined when the raw material is treated with toxic chemicals such as dyes, bleach and detergents etc. It is advised to look for materials that haven’t been treated with harmful chemicals. A couple of certifications are reassuring on this front: 1) OEKO-TEX® - which ensures the effectiveness in protecting consumers from potentially harmful substances; 2) REACH by the European Chemical Agency (ECA) – which ensures the chemicals used in the production are of manageable potential concern, degradable and will not emit hazardous gases upon degrading; 3) Zero Discharge Of Hazardous Chemicals (ZDHC) – which supports safe chemical management practices across the entire value chain.”
Size and fit directly affect a garment’s physical longevity. Finding the correct fit for customers can be difficult and sizing issues commonly lead to the early disposal of garments. As a designer you can consider incorporating specific features which allow the user to adjust the size of the garment, such as built-in fastenings or allowing room for alterations. For many garments nowadays, an easy option to accommodate a diversity of body shapes and allow improved fit is simply using fabrics with stretchy fibres like elastane. Another approach could be to offer alteration services to users after purchase. For tech savvy designers, garment customisation can also be considered with the introduction of body scanners, which capture detailed data about the user’s shape and measurements for a personalised and accurate fit.

Danish designer Mette Julie Bundgaard Nielsen developed a flexible sizing system through her Circle project to increase the use of a garment throughout the user’s life which allows for alterations. This dress is printed with visible grading lines that users can follow when altering the garment. To allow for further adjustment, the seams are covered with removable bias tape and the dress has extra seam allowances.

For a more futuristic approach to size and fit, you can seek opportunities to integrate body scanners like Hong Kong robotics and apparel start-up Denim Unspun. The team utilises a Fit3D ProScanner to scan customers’ bodies to create personalised denim jeans. Tackling one of the most difficult garments to find a satisfying fit, Denim Unspun uses a specialist fit algorithm to “wrap” the denim fabric around the digital avatar to ensure an accurate and unique manufacturing process.
Producing a high quality garment made of durable materials in the correct size is a good starting point for you to ensure the user continues to wear the garment through the years, but without knowledge about how to maintain and care for the item, the garment could still be discarded early. You can help users extend the life of their garments by attaching clear care labels with fibre and washing instructions. You can also provide additional advice to users on how to repair - or offer services to repair - common issues.

The UK charity, Waste & Resources Action Programme (WRAP), which seeks to promote and incorporate the circular economy into the daily life of consumers, can give you detailed information on how to better educate customers on longevity. The Love Your Clothes campaign, launched in 2014, is one such example of their consumer education initiatives and was developed together with several other industry organisations to accelerate a change in the way the UK consumers buy, use and dispose of their clothing. Supported by retailers Marks & Spencer, Tesco and Ted Baker, the campaign raises further awareness about how customers can make a difference by taking small steps that facilitate improved care and repair of their clothing.

EXPERT’S TIP

— Alison Gwilt, Fashion design academic, consultant, researcher and Redress Design Award Advisor —

“When you design for longevity it’s important to understand how people use the clothes that you create. While you can interview people about their clothing care and maintenance practices, I would also advocate observing people in action. If you watch someone interacting with their garment, for example, during laundering you will see how and where practices need to be improved to help extend the garments life. This observation provides useful data to you as a designer, but it’s also an educational experience for the consumer. Read chapter 3 of ‘A Practical Guide to Sustainable Fashion’ to get more insights.”
HOW TO MAKE CLOTHES LAST LONGER?

Making clothes last longer refers to the psychological longevity, which in essence relates to how the user feels about a garment within its lifespan. This can include the comfort of the garment over time, how its appearance and texture change, the relevance of the style and the user’s emotional connection to the garment.

1 STYLE

The overall style of a garment can play a crucial role in extending its life. Consider items in your wardrobe which seemed so fresh and on trend when you purchased them but now look dated. To ensure that garments continue to look fresh, you can incorporate a timeless style into your work. This also enables you to appeal to a wider audience and withstand the rapid pace of constantly changing trends. Another change in modern life is the shift towards blending professional and personal time and space. Designers should aim for their garments to reflect this shift in lifestyle and allow for multipurpose use. Another shift that can be seen in society is a growing openness to gender fluidity and this is reflected in today’s increasingly androgynous garment styles. People are progressively rejecting traditional representations of gender and cultivating their own styles based on personality and what suits their body type.

Launched in 2016 on Kickstarter, US womenswear brand VETTA encourages women to simplify their wardrobes by offering versatile capsule collections made up of five items that can be mixed and matched to create a potential 30 different outfits. The brand provides inspiration for the numerous possibilities the customer can create and assures them of looks appropriate for work and play. To further encourage these timeless pieces to remain in active use, VETTA uses fabrics in a neutral colour palette, which also allows for easy styling with a variety of accessories.
Outside of function, people do not usually connect with material objects in the same way as they connect with the story behind the objects. Consider a handmade jacket discovered in the back of a family member’s wardrobe or a sock that was repaired by a loved one - these are items which possess value outside of their material make-up. It is the story they possess that keeps them in active use. You can use this concept of emotional connection to share the story of your work with your customers. A good way to start is to gather feedback from customers in order to better understand their values, needs and aspirations. By understanding them on a deeper level, you can create concepts which resonate with them directly. Another way is to work with materials which have an interesting story that can be incorporated into the new creation.

Jesse Lee, the Second Prize winner of the Redress Design Award 2018, grew up in a close knit family in Hong Kong and one of his most prized memories is his mother’s habit of wearing his father’s jackets. Whilst the garments were oversized on her, to Jesse, they were a perfect fit as they represented the strong bond between his mother and father. To share this special story of close family ties, Jesse sourced textiles from around his home and from family members. Through patchworking techniques, he then created the works shown here, including a quilted bomber jacket and skirt made of socks (on the left) and a raincoat made of umbrella fabric (on the right), all of which show strong individuality and encourage the consumer to connect and share the story behind the garments.
The most successful designers and companies do not just create products, they create brands with strong identities and values which align with their audience. In order to build brand loyalty, you should understand what is important in people’s current lives, as well as being aware of growing issues around social and environmental concerns, changes in lifestyle due to technology advancement etc. This awareness will enable you to empathise with the user’s future needs and move toward a circular design process which takes into account an extended chain of makers and users. There are a growing number of designers and brands who use this approach, but it’s still rare in the industry due to the complexities of the design and manufacturing process at scale.

Chinese womenswear brand JNBY offers a broad range of contemporary products and its brand portfolio creates a lifestyle ecosystem that addresses customers’ needs at different stages of their lives. JNBY has a well established customer base in China as their garments are known to be comfortable, high quality and above all, uniquely fit for the local body type. The brand does little marketing in the traditional sense and does not use celebrities in their advertising - instead they encourage customers to create their own unique style with many mix and match separates.

**EXPERT’S TIP**

— Eileen Fisher, Fashion Designer —

“I believe simple clothes are empowering. It’s so much about the wearer - how she moves and feels in her clothes.”

“For me, it is about simplicity. If it is simple, it can be worn over time in multiple ways.”
Canadian brand Encircled abides by the ‘less-is-more’ outlook when designing their versatile collections. Creating multiple outfits with one garment enables users to create complementary looks for different occasions. Encircled’s Chrysalis Cardi (shown here), can be worn eight different ways, from a one-shouldered dress to an infinity scarf and more. This garment can take the user from day to night and is suitable to wear throughout the year.
Garment personalisation enables people to use their fashion choices to express their own style, self-image and values. According to The State of Fashion 2018 report, the number one consumer shift is a growing demand for personalisation. You can tap into this demand by using technology to better understand consumer tastes whilst creating customised, unique experiences and products. As a designer you can collaborate with brands and customers to provide different options of personalisation. This added element has the potential to increase the value and longevity of the garment, as well as consumer loyalty. Personalisation can range from pre-designed items with the option to select unique colours or materials or simply adding embellishments.

American brand Vans has been connecting with youth culture to promote creative self-expression and authenticity. The product line “Customs” allows customers to select their own design including materials, style, patterns and colour, as well as the option to add symbols or text on to their shoes.
Classics Anew is a Hong Kong based brand founded in 2014 by Redress Design Award Alumni Janko Lam. Early in her career, while working for a TV station designing costumes for a Chinese period drama series, Janko became inspired by the style of loose form robes and wide sleeves. This exposure to traditional clothing led her to adopt Chinese tailoring techniques to create the heritage inspired, modern cheongsam dresses and separates that form her design collections.

Can you give us some insight into your customers?
Classics Anew collections are based on heritage design, well-tailored garments and handmade details, which have become our brand signature appreciated by our customers. In addition, we offer cheongsam making workshops to our customers, and I think this experience of being a part of the fittings and tailoring brings the customers closer to their garments, thereby creating a sense of occasion, loyalty and personal attachment to our brand.

What is your key approach to make long lasting garments?
The brand offers alterations for all of the Classics Anew collection pieces. To ensure further longevity, we also offer a custom-made service in the hope that customers will treasure items more over their lifetime if they are a perfect fit.
How did you ensure the garments last a long time?
By engaging directly with customers, I have been able to better understand their desires and needs. Classics Anew collections include modern detailing which enables the customer to easily mix and match our pieces with existing items in their wardrobe. Many pieces are also cut with a looser fit in comparison to the traditional fitted cheongsam, which creates greater comfort for the wearer, as well as additional flexibility if the wearer’s body size changes over time.

Why does Classics Anew choose to use overstock textiles?
We use traditional fabrics such as woven silk, as well as non-traditional fabrics such as denim, (as above on the left). The denim is from overstock that would otherwise be discarded and rescuing these unwanted fabrics is an action that aligns with my sustainability goals. I want to make it clear that I am not a sustainable designer, rather, I believe it is my responsibility as a designer to use quality textiles that will be valued and withstand time. I also try to use all the scrap materials after cutting patterns to create buttons for the garments (shown above on the yellow floral blouse), which also adds to the storytelling of Classics Anew.

Can you tell us more about the workshops you organise for the public?
Classics Anew organises regular workshops for both children and adults in our Hong Kong studio. We have hosted workshops about how to create traditional Chinese clothing such as a custom cheongsam dress, and have also taught people how to make handmade fabric flower buttons. After opening the studio, I found I frequently received questions from visitors about why a cheongsam dress has such a high price tag. I started the workshops as a way to educate the public about the impacts of the fashion industry and to encourage a recognition of the skilled work that goes into making clothing. I find that after the workshops, my students have a deeper understanding of the craftsmanship that goes into making garments which helps with the dialogue between clothes and users – a disappearing feature in fashion nowadays.
CASE STUDY

FASHION CLINIC

Launched in 2017 by fashion activists Toby Crispy and Kay Wong, the Hong Kong based Fashion Clinic strives for fundamental change in the fashion industry. Pushing against a global acceleration in the production and consumption of clothing, Fashion Clinic works to create a new system by providing services over products. The team advocate for consumers to ‘choose well, buy smart and re-experience fashion’, in order to close the loop on the consumption cycle.

What inspired you to launch Fashion Clinic?
We worked in the fashion industry for over 10 years and felt the same exhaustion from keeping up with collections from season to season. We found the cycle was becoming faster and faster with an emphasis on driving lower prices to the point where we decided to change career paths to focus on creating fundamental change to counteract this broken system.

What does Fashion Clinic offer?
Instead of selling products, we offer repair and redesign services for people’s existing wardrobes. We found many people have garments that they no longer wear and we encourage them to think twice before giving away - bring them to us and we can breathe new life into them.
What process do you go through with your customers?
We normally encourage our customers to first do a complete tidy and re-organisation of their wardrobe. This process allows them to evaluate each piece and keep the items which they truly love. For the items that have sentimental value, but are ill fitting or damaged, Fashion Clinic will rework them so they can continue being an active part of their wardrobe.

What kinds of garments do your customers bring in for reworking?
A lot of our customers are former shopaholics who are passionate about fashion and are now converting to be more conscious about their consumption. They bring us garments which have special meaning to them but for one reason or another, they are not actively wearing. Some items are inherited from family members or were worn once at a special occasion. Most of the time, the style is simply outdated, no longer fits or has damage such as staining.

How do you revamp your customers’ clothes?
It depends on the state of the garment and each item is unique. We typically mix traditional darning stitches with sashiko or boro patchwork with contemporary embroidery. In the case of redesigning garments, we have done complete transformations like turning a pair of jeans into a cool jacket or turning a men’s button-up shirt into a maternity dress.

Can you share some advice about how to design garments for longevity?
We believe simplicity is the key to long lasting items. To quote German industrial and product designer, Dieter Rams, “...good design is as little design as possible. Complexity is often a sure sign that the functional needs have not been solved.”
LEARN MORE

USE THIS...
To truly evaluate the longevity of a garment, there are some fantastic tools available online which designers can use. Enjoy exploring!

Common Objective
This learning platform provides useful resources, intelligence and training materials. Join CO to get matched with resources and connections that will help you to achieve your goals.

www.commonobjective.co

IDEO - Circular Design Guide
The Circular Design Guide was created by the Ellen MacArthur Foundation and IDEO. The practical guide includes 24 methods for circular innovations, as well as a resource bank with video interviews, worksheets, case studies and links.

www.circulardesignguide.com

Sustainable Apparel Coalition, HIGG Index - Material Sustainability Index (MSI)
Developed by the Sustainable Apparel Coalition, HIGG Index is a tool that enables users to measure every stage of the lifecycle and assess their company or product’s sustainability impact.

product.higg.org/product-tools

TED’s TEN
Textiles Environment Design (TED) Ten is a toolbox for designers which outlines strategies to create products which have less impact on the environment.

www.tedresearch.net/teds-ten/

WRAP guides
Waste & Resources Action Programme (WRAP) has published these extensive guides on how designers and users can extend the use of their existing wardrobes.

Sustainable clothing: A practical guide to enhancing clothing durability and quality. This guide walks through step by step how to design with longevity in mind.

www.wrap.org.uk/content/sustainable-clothing-guide-2017-pdf

Valuing our clothes: The Cost of UK Fashion

Why Love Your Clothes? is a website created by WRAP to educate consumers on how to care, repair and enjoy a long life for one’s garments.

www.loveyourclothes.org.uk/about/why-love-your-clothes
WATCH THIS...

Love your Clothes campaign YouTube Channel | www.youtube.com/channel/UC3R7GH1b15rgtd59CpRisg
WRAP: Introducing Durability | www.youtube.com/channel/UC3R7GH1b15rgtd59CpRisg
Nike | Circularity: Guiding the Future of Design — Durability
www.youtube.com/watch?v=TDMMntM02N4

READ THIS...

A Practical Guide to Sustainable Fashion (2014) by Alison Gwilt
www.bloomsbury.com/uk/a-practical-guide-to-sustainable-fashion-9782940496143
Circular Economy Ellen Macarthur Foundation | www.ellenmacarthurfoundation.org/circular-economy
Circularfashion.com | circularfashion.com/key-principles/design-for-longevity
Craft of Use by Kate Fletcher
Emotionally Durable Design: Objects, Experiences and Empathy (2005) by Jonathan Chapman
Fixing Fashion: Clothing Consumption and Sustainability
by Environmental Audit Committee of the House of Commons in the Parliament of the United Kingdom
Patagonia Product Care | www.ifixit.com/Wiki/Patagonia_Product_Care
PLATE: Product Lifetimes And The Environment: Conference Proceedings of PLATE 2017, 8-10 November
2017, Delft, the Netherlands (Research in Design) edited by Conny Bakker and Ruth Mugge
The Handbook of Design for Sustainability (2017) edited by Stuart Walker and Jacques Giard
Understanding REACH | echa.europa.eu/regulations/reach/understanding-reach
ZDHC | www.roadmaptozero.com/about

BE INSPIRED BY...

Classics Anew | www.classicsanew.com
Cosmos Studio | www.cosmosstudio-store.com
Denim Unspun | denimunspun.com
Encircled | www.encircled.ca
Fashion Clinic | www.fashionclinic.co
JNBY | www.jnby.us
Local Wisdom | localwisdom.info
Mette Julie Bundgaard Nielsen | www.bundgaardnielsen.com
Vans | vans.com
Vetta Capsule | www.vettacapsule.com
Victornee | victornee.com
Vivienne Westwood | www.viviennewestwood.com
LEARN THE LANGUAGE...

**Androgynous** is the combination of masculine and feminine characteristics.

**Abrasion resistance** is the ability for materials to remain intact against different methods of rubbing or wearing by means of friction.

**Circular economy** is a system that is based on designing out waste, keeping materials and products in use, recapturing resources and regenerating natural systems, that uses renewable energy resources in order to continue building economic, natural and social capital. It is opposite to the linear model.

**Colour fastness** is a measurement of how resistant materials, typically textiles, are to colour running in exposure to liquid or fading in exposure to light sources.

**Ecotoxicity** refers to the possibility for biological or chemical stimuli to affect an ecosystem.

**Eutrophication** is the uncontrolled amount of nutrients in a body of water caused by land run-off which results in a dense growth of vegetation, typically algae.

**Human toxicity** is the potential harm to humans due to a chemical release in the environment.

**Linear model** refers to a production and consumption model based on take, make and dispose that is widely practised in the fashion system.

**Longevity** is the timespan at which the item remains relevant and useful. When referring to garments, longevity includes both the physical and psychological factors which are involved in creating extended usage.

**Physical durability** is the ability to resist physical and chemical deterioration from the environment in which the item is used.

FOOTNOTES

1. WRAP (2017), Valuing Our Clothes: the cost of UK fashion  


3. The Telegraph(2013), Vivienne Westwood: Everyone buys too many clothes  

4. Fit3D (2018), Fit3D Body Scans Used to Make Custom Jeans  
