

Herman Miller

Background

With its origins based in Michigan, USA, but now well recognised throughout the world, Herman Miller is perhaps one of the most influential companies in the office interiors industry. Initially a home furnishings company, office furniture became a strong focus in the 1960's. For the first time, an 'open plan' office system was considered, and new thought was given to the design and layout of the office environment.

More recently, Herman Miller was responsible for several iconic chairs, such as the Aeron, Mirra and Celle. Operations have grown substantially, with sales offices, licensees and dealerships in over forty countries across the globe. Sustainability is important, for both product design and manufacture, and also for daily business practices. It was over fifty years ago, in 1953, that Herman Miller founder, D J De Pree, stated 'we will always be good stewards of the environment.' This statement has been adopted throughout the company and is the basis for the environmental programme in place at the company, entitled 'Policy 53'.

Long term focus has been on design incorporating durability, quality and innovation. Products come with a twelve year warranty, yet expected life is typically longer. Whilst sustainable design has been considered for many years, a more structured 'Design for the Environment' (DfE) team has now been formed, responsible for developing environmentally sensitive design standards for Herman Miller products. To this end, it has initiated the DfE protocol as an integrated part of the design process. The protocol was designed in line with William McDonough and Michael Braungart's "Cradle-to-Cradle" design philosophy. The design process is independently assessed and certified by McDonough and Braungart's company (MBDC) who are seen as the leaders in eco-effective design principles.

Based on this principle, all new products are designed to be high quality products that are safe, healthy and ecologically sound. During the design process the DfE team meets with designers and engineers to assess material chemistry, disassembly and recyclability, as well as incoming packaging and potential waste generation. By examining these and related issues, as well as conducting rigorous durability testing, the Herman Miller goal is to create great working environments, while respecting and protecting the natural environment.



MBDC Cradle to Cradle Design Protocol

Material Chemistry and Safety Inputs

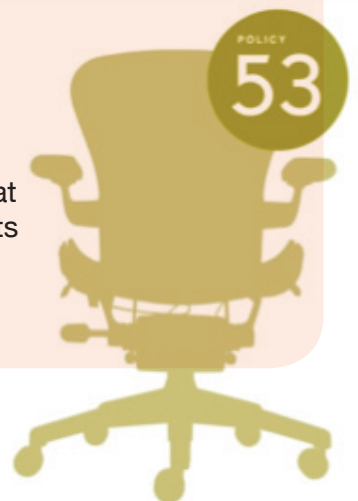
what chemicals are in the materials specified – are they the safest available?

Disassembly

are products easy to take apart at the end of their useful life to recycle materials and components?

Recyclability

do materials contain recycled content, and more importantly, can they be recycled at the end of the products useful life?



Aeron

The Aeron chair, designed in 1994 by Don Chadwick and Bill Stumpf, was immediately recognised as no ordinary office chair. With distinctive looks and pioneering ergonomics, it is perhaps no wonder the Aeron became one of the biggest selling and probably most widely recognised office chairs of all time. With consideration given to the sitter and the environment, Stumpf and Chadwick created something so unusual and attractive that it not only won several prestigious awards (including the 'Best Design of the Decade' Gold Award from the Industrial Designers Society of America and Business Week magazine), it even earned itself a spot in the Museum of Modern Art.

Environmentally aware design

From the very start of the design stage, sustainability was considered in the Aeron chair. The designers gave themselves the following remit:



'Environmentally, it ought to be benign. Its manufacture should be sparing of natural resources, and the chair itself should be durable and easy to repair, recyclable and easy to disassemble.'



The resulting product is made from nearly two-thirds recycled material, with 94% recyclable at end-of-life. Although the Aeron was designed before the Herman Miller 'Design for Environment' (DfE) protocol was introduced, it was designed using the same principles and has retrospectively been awarded the MBDC Cradle to Cradle Silver certification. As such its design criteria included easy disassembly, to allow efficient repair and reuse of components if necessary. This simple concept can significantly reduce the level of unnecessary replacement of complete chairs, and potentially diversion of waste to landfill.

Now, having just celebrated its fifteenth birthday, the chair is still in popular demand, selling millions worldwide, and many of the original range are still in circulation. The Herman Miller warranty lasts twelve years, and as such many chairs are at the age to reach the end of this. Many chairs have excellent functionality for longer than this period, though chairs may be starting to show some wear or damage. In order to reduce these functional, high value commodities being dumped to landfill, Herman Miller developed the Aeron 'Revive' programme, a refurbishment programme to offer existing customers the opportunity to trade in Aeron chairs on a buy-back scheme.

Revive

Though still in its infancy, the Revive programme is already showing great success. A buy-back scheme that allows customers to trade in Aeron chairs which are then refurbished, depending on the condition of the particular piece. Chairs are then traded back to the original client or offered for resale elsewhere, backed with a full three year warranty, at a more affordable price.

The process

The buy-back agreement can be arranged between Herman Miller and the client, or via a dealer. Once organised, Herman Miller will assess the condition of the chair in order to determine a buy-back price, and collect and transport the item(s) to their seating plant. A qualified technician then disassembles each piece (if necessary) and replaces or repairs any defective components. If new components are needed, these can often be taken from broken chairs or those that have been unsuitable for refurbishing, ensuring minimal input of new resources.

Whilst Herman Miller products are designed to have as little impact on the environment as possible, any new production of components requires energy and raw materials. The largest impact in the life cycle of furniture occurs during manufacture and disposal – in particular the production and treatment of raw materials – and therefore product life extension in this way reduces the impact of both.

Once the chair is at full functionality, it is thoroughly cleaned and resprayed to give it a new, refreshed look. After final inspection, it is given a three year warranty and released for sale. Herman Miller iterate that

'Revived chairs offer optimal comfort, ergonomics and performance for years to come. Through extending the products life, the Revive programme is yet another example of Herman Miller's commitment to sustainable development.'



Not all chairs are in suitable condition for refurbishment, and where this is the case (and for non-Aeron chairs), Herman Miller work with Green Standards, who collect and redistribute office furniture (along with IT equipment) to good causes in the UK and overseas to provide for educational, medical facilities, orphanages and wildlife centres in less developed countries. When chairs are not suitable for reuse, the chairs are disassembled and recycled, preventing additional materials to landfill. Products are designed for longevity, but also recyclability at the final end of useful life – for example the Linea model is 99% recyclable and can be disassembled in less than five minutes!



Barriers and incentives

Revive is a new scheme and the opportunity for growth is substantial. Initial feedback from clients has been very positive, and Herman Miller have found it far more difficult to retrieve unwanted Aeron chairs than it has been to sell them! The key issues relate to the cost of remanufacture, and collecting a wide range of parts - the Aeron chair overcomes both of these.

Design for disassembly is crucial for economic and technical feasibility of remanufacture, and the Aeron can be dismantled on site if necessary. Also, as it is such a popular model, and has sold millions nationally, collection is far more straightforward than it would be for companies changing design every few years. This is particularly true if by the time the item is recovered, the manufacturer is no longer producing the same model (making replacement components difficult to find).

Although theoretically the recent economic crisis would be considered to be an opportunity for growth in sales – as purchase price is lower – the actual sales are significantly less than the demand for Revive chairs, so growth can only be achieved by increased collection. This, however, means that there is less likelihood of a plummet in sales should the economy suddenly become strong once more. Limited space for remanufacture also restricts the quantity that can be sold at any one time. Should the Revive scheme see continued success, there is an opportunity for investment to extend space and meet demand more easily.



The future

It is uncertain as to whether this scheme will be rolled out to other countries, such as the USA. As each nation has different attitudes and infrastructures, such schemes may be more or less successful. In America, particularly, the current secondary market system is strong, with 9% of all sales of office furniture from remanufactured pieces. Unlike the UK, where the market is only just starting to become established, competition in the USA for remanufactured chairs is strong.

Currently, the Aeron is the only chair fully serviced in this manner, largely due to the age of the product, with many individual chairs now reaching the end of their warranty. Even after warranty, many customers continue to retain the chairs as no loss of function or significant wear is apparent. Other popular chairs, such as the Mirra and Celle are relatively new and may not have reached the end of their warranty period. Once these chairs start to reach their warranty ends, the Revive programme is likely to be extended to include them. All Herman Miller chairs are designed with disassembly in mind – as per the MBDC cradle to cradle protocol, and therefore none will present obstacles for remanufacture.

