Circular economy leader

Lexmark has been in support of the circular economy and remanufacturing initiatives since its inception 30 years ago. In 1991, we began reclaiming material through our Lexmark Cartridge Collection Programme (LCCP) and we have been creating post-consumer recycled plastic (PCR) in our closed-loop process for 10 years. As a leading remanufacturer, we understand that the adoption of circular economy principles promotes innovation and economic growth in a more environmentally sustainable manner.

Our founding membership of the European Remanufacturing Council (CER) provides Lexmark with the opportunity to share with other businesses how to extend product life and retain valuable materials. As a member of CER, we seek changes to policy with the aim of making remanufacturing a normal part of a product lifecycle. Members in the CER aim to triple the value of Europe's remanufacturing sector to over $100 billion by 2030.

Design for long life and durability
Lexmark makes a clear choice towards planned durability, intentionally engineering long-life devices that last seven years or more. Device life is extended further through remanufactured and repaired parts and supplies. Longer life devices save finite resources, reduce waste to landfill and lower carbon emissions. Preserving resources and reusing materials has been important to Lexmark since our inception. We've reused over 35 million kilograms of recovered cartridge materials since 1996 by converting millions of used toner cartridges into Lexmark-certified reconditioned toner cartridges. For more information on how Lexmark designs our products for extended life, click here.

Industry leadership
Lexmark actively works with many stakeholders, partners, industry groups and governing bodies to re-think and re-design our products in the framework of a circular economy. Lexmark participated in impactful sustainability initiatives and projects with other industry leaders. Our partnerships with companies committed to advancing the circular economy provided us with the expertise to conduct internal projects that reduce waste and promote the long-term use of resources. At Lexmark, global cross-functional teams from over 20 areas of the business incorporate circular design into our products and maximise their lifecycle by offering robust take-back and remanufacturing programmes.

Our commitment to remanufacturing is recognised by prominent supporters of sustainable manufacturing. Our endeavours most recently resulted in an EcoVadis Platinum medal, the highest level of this extra-financial assessment. EcoVadis has grown to become the world's largest and most trusted provider of business sustainability ratings, creating a global network of more than 90,000 rated companies and their supply chains to assess their performance in the field of corporate social responsibility (CSR) and governance. Lexmark is in the top 1% of all companies assessed and a clear leader in our sector. Since 2014, Lexmark has consistently received an EcoVadis gold rating, which was the highest rating until platinum was added last year.

Lexmark also received the ISRI 2020 Design for Recycling Award for our toner cartridge design and recycling process. Additionally, Lexmark received Manufacturing Leadership awards in sustainability leadership for reuse and reconditioning efforts and ranked 9th in CR Magazine's 100 Best Corporate Citizens list when we were publicly traded. For more on Lexmark's awards and recognition, click here.

EU research projects
To assist our innovative efforts in remanufacturing and to promote a circular business model, the European Union Framework Programme for Research and Development awarded Lexmark a Horizon 2020 research and innovation grant under agreement Nº 776714 to participate in the C-SERVEES project. Selected from over 100 applicants, Lexmark works with other C-SERVEES project participants to develop innovative circular economic business models for the electrical and electronic (EE) sector in areas such as device refurbishment. The objective of the C-SERVEES project participants is to transform the EE sector into an efficient circular economy using new processes and novel information technology solutions. Innovative digital technology is a key element for improving workforce efficiency by transitioning refurbishment processes from manual to automated. Our focus on sustainable resource management resulted in praise for Lexmark. The European Commission's report on "The case of re-usability of printer cartridges" concludes that "Lexmark appears to be the clear market leader in printer cartridge reuse, presenting a comprehensive set of re-use statistics." For more information on Lexmark's contributions to the C-SERVEES project, click here.

Digital passport
Lexmark has taken a proactive position to help consumers to make informed and sustainable decisions. We offer a digital passport for our product lines with key environmental information in support of the circular economy. The Lexmark Digital Passport can be referenced with information such as product buying guides, providing repair and recycling options, lifecycle analysis and material selections.

Recycled plastics industry leader
To encourage the use of recycled plastic, Lexmark accepted the European Commission's call for action in Annex III of the European Strategy for Plastics. Lexmark is one of the initial 70 companies and businesses voluntarily pledging to use more recycled plastics in Europe and to

ensure that, by 2025, 10 million tons of recycled plastics find their way into new products.

Lexmark is an industry leader in the use of reclaimed plastic with 39% of the plastic content, by weight, across all new Lexmark branded toner cartridges, derived from post-consumer sources, including our LCCP post-consumer, closed loop process. Of the LCCP reclaimed plastic used, 87% directly impacts remanufacturing reuse, with 13% from the LCCP PCR feedstream. Lexmark's goal is to increase the use of reclaimed plastic through the PCR and reuse processes by 50% by 2025.

Over 90% of the materials by weight used in our hardware products are recyclable. Today, 92% of our hardware models contain PCR content with almost 80% of the models containing over 30% PCR content. Continual reuse of recycled materials greatly reduces the amount of waste sent to landfill. Click here to learn more about Lexmark's use of PCR.

Electronics precious metals recovery
Lexmark continues to explore the recovery of precious metals to enable clean, domestic, recycling of sorted electronic waste through the chemical extraction of precious metals (primarily copper and gold). Recovering valuable materials from end-of-life devices and recycling them into new products expands Lexmark's leadership in the circular economy movement.

Data analytics accelerates circular economy
Leveraging Lexmark data analytics, companies have visibility of the location and condition of their products to continuously monitor performance. Having access to real-time data enables detailed tracking of devices and supplies to ensure efficient use of Lexmark's long-life products. Lexmark manages over one million devices in more than 2,000 locations around the world with over 10 terabytes of data analysed weekly. Maximising and extending the life of our products provides our customers with the opportunity to operate more sustainably. As part of the EU-funded C-SERVEES project, Lexmark is working on a private blockchain data scheme. The data provide a reliable system for sustainable materials optimisation throughout the stages of the circular economic process (origination, manufacturing, recycling, transport and use-phase). Artificial intelligence (AI) may also be used to better predict product performance and reliability, and in lifecycle analysis.

Remanufacturing role model
Lexmark helps our customers to print sustainably by using a combination of new and recycled components to minimise their environmental footprint. Designed and developed for maximum sustainability benefits, Lexmark's Corporate Cartridge product line is guided by the principles of zero waste and the circular economy. The Corporate Cartridge closes the loop during its production through the incorporation of certain components returned via the LCCP.

Cartridges returned to our manufacturing facilities through our LCCP are disassembled, and then components suitable for reuse are selected and used in the production of Corporate Cartridges. Innovative processes created by our engineers recover post-consumer recycled (PCR) plastic and pelletise the PCR for integration into new parts. Reclaimed PCR plastic is incorporated into over 60 Lexmark components at a level of up to 100% PCR plastic.

Each year, LCCP prevents millions of Lexmark toner cartridges from ending up in landfill. In 2021, LCCP collected 4,689 metric tonnes of returned cartridges from our customers. 96% of materials reclaimed from these cartridges were reused or recycled. Energy was generated from 4% of toner waste collected. Devices returned to Lexmark go through a process that assesses if they can be remanufactured for reuse. If not reused, parts are harvested for the refurbishment process. Lexmark works with recyclers to reclaim parts that can be used to refurbish printers, which keeps the printers in service longer and reduces the need to recycle used hardware.

Continually improving the way we do business
Lexmark affirms our commitment to designing out waste and pollution through collaboration with organisations supporting the circular economy business model. Company-wide innovation has led to the discovery of reuse and recycle techniques novel to our industry. Lexmark strives to minimise waste whilst maximising resource efficiency through remanufacturing and empowering our customers to protect natural resources by joining our efforts. Click here to learn more about Lexmark's Product Sustainability.