



Re-manufacturing & re-conditioning *Tackling end-of-life to foster Circular Economy*

How Re-manufacturing creates jobs in Europe ?

A success story

Patrick Carminati
Manufacturing and Sourcing

January 25th 2018
Brussels EP



Lexmark™



An empty laser cartridge is made of

➤ *Around 80% plastic*

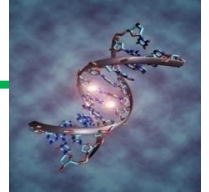


“Remanufacturing is..... it involves dismantling the product, restoring and replacing components and testing the individual parts and whole product to ensure that it is within its origin design specifications. Performance after remanufacture is expected to be at least to the original performance specifications.”

Source: The Centre for Remanufacturing and Reuse



**At Lexmark, from design to re-manufacturing for 20+ years
Lexmark collects and remanufactures laser cartridges**



**Successful Re-manufacturing
=
Re-manufacturable products + Collection**

Re-manufacturing as a trigger

Laser cartridges Sourcing map – 2012

Decision taken to adjust strategy and set Regional Manufacturing ,
Challenge: how to make the EU case competitive ?

- Manufacturing cost: EU not competitive
- Total landed cost: EU not competitive
- **What about adding Re-manufacturing benefits ?**



*European
distribution
centre*



0%



Re-manufacturing as a trigger

Laser cartridges Sourcing map – 2012

Decision taken to adjust strategy and set Regional Manufacturing ,
Challenge: how to make the EU case competitive ?

- Manufacturing cost: EU not competitive
- Total landed cost: EU not competitive
- **What about adding Re-manufacturing benefits ?**
- ✓ Re-use of empty units & components



➤ **EU case turned positive**

Re-manufacturing as a trigger

Laser cartridges Sourcing map – 2017

- **Environmental impact**, reduces overseas containers
- **Business benefits** Customer service & Cost
- **Re-manufacturing benefits**
 - 20+ % of the products sold in EU are remanufactured
 - Thousands of components reused
- **Job creation**, of which 20% skilled people
 - From General Site Manager to HR, Finance, Procurement, Quality engineer & technician .../...
 - On site & local suppliers (plastic parts moulders, packaging providers, freight forwarder .../...)
 - Improve job security & satisfaction



*European
distribution
centre*

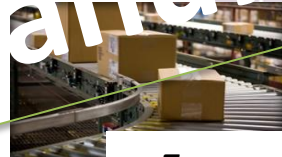
45%



Re-manufacturing as a trigger

Laser cartridges Sourcing map – 2020

- Further more reduce CO2
- Increase business benefits
- Create even more local jobs



75%

~~45%~~

*European
distribution
centre*

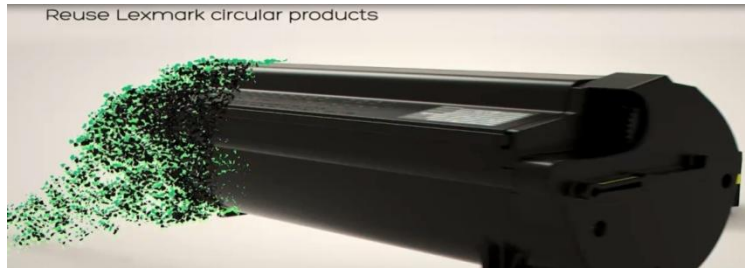
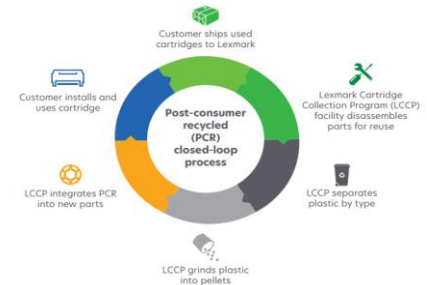


Re-manufacturing Opportunity

Moving forward: close the loop

➤ Implement/replicate full dismantling

- Maximize component reuse
- Sort material and ship them back to component manufacturer for re-using in Lexmark products



Member of the CE 100



➤ **Must reduce to zero !**

What would be helpful ?

- ❑ Promote collecting, sorting, dismantling & re-manufacturing of empties.
- Move up waste hierarchy, € and EU job opportunities
- ❑ Industry targets, Green Public Procurement, incentives cross industry initiatives
- Increase return & demand



THANK YOU !



patrick.carminati@lexmark.com

maxime.furkel@lexmark.com

CSR.lexmark.com/solutions



Lexmark™