**Business Model Case Study Description**

**ARP suppliers – Toner cartridges**

**Company:** ARP suppliers  
**Locations:** Maastricht, Netherlands  
**Type:** Independent Remanufacturer  
**In reman:** Since 2000  
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HP Laser Toner - Refurbishment of HP laser toners cartridges.

**Core Sourcing**  
Retrieving toners from toner brokers.

**Business Model**  
An empty laser toner does have some value. Brokers collect these empty laser toners, ARP buys these empty toners and disassemble them. Components that can be reused are cleaned like screws. Key components will be replaced to guarantee quality. Aluminium and iron parts are collected and brought to a metal and iron trader who will recycle the material. Besides this 99% of all the plastics cannot be reused and becomes a waste stream. After cleaning, the toner is assembled, then the toner is filled with ink again and reassemble with the cleaned reused and new components to a cartridge. The cartridge can be bought by the (often business to business) consumer. Toners are recycled maximal two times, this is to guarantee the quality, through the process 80-99% of the original quality can be reached. After two times of reuse the cartridge is disassembled and all components become a waste stream. The cartridges are sold online in Germany, Austria, the Netherlands, France and Belgium. When a new type of toner is launched, it takes two years after the launch of a new toner to build a buffer of toners. With the current business model, remanufactured cartridges can be sold for 60%-80% of the initial price. This percentage depends per type of cartridge, which on the demand. So if an original cartridge is sold for €100, ARP can sell remanufactured cartridges for a price between €60,- and 80,-. To differentiate themselves from competitors, ARP ensures a guarantee of 4 years.

**Economic Benefits**  
For the customer, the price is at least 20% lower compared to an original toner. The collaboration with brokers create some jobs which can be seen as an economic benefit.

**Environmental Benefits**  
Instead of make, take, waste the service life of a cartridge is extended (two times of reuse max.).

**Social Benefits**  
Social benefits are unknown.

**Advanced Materials Recovery**  
There are no advanced material recovered in ARP’s remanufacturing business.

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**Developed for ERN – European Remanufacturing Network**