CIPS Switzerland Event in Lausanne, April 26\textsuperscript{th}

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Head of Laser Supplies Manufacturing & Sourcing, Lexmark

Procurement - Making it Circular
Journey and key takeaways
Procurement - Making it Circular Journey and key takeaways of A success Story
« What is Circular Economy ? »
The European Commission defines a circular economy as one

“where the value of products, materials and resources is maintained in the economy for as long as possible, the generation of waste minimized, and resources are kept within the economy when a product has reached the end of its life, to be used again and again to create further value”

Economical and Environmental issues, Resource Scarcity & Global Warming
Growing interest in Europe

Political
- Economical impact
- Raw material dependency
- Job creation

Industrial
- Customer demand (Corp Social Resp)
- Marketing

Various players
« In your own environnement, your own company, how Circular Economy concept apply ? »
An empty laser cartridge is made of
- About 80% plastic
- About 15% metal
50 k MT of cartridges (industry) land filled in Europe in 2015,

- Must reduce to zero

Lexmark collects 40+% of the units it sells: zero landfill and less than 3% energy recovery
Circular Economy on laser cartridges @ Lexmark

- From design to collection for 20+ years
- Program offered for free to customers

Collect/Sort empty units to:
- Remanufacture
- Reuse
- Recycle and ensure no landfill
The success story
Laser cartridges Sourcing map – 2012

European distribution center

0%
Corporate Strategy adjustment

Decision taken to adjust strategy and set Regional Manufacturing with following expected benefits

- Customer service & satisfaction increase
- Cost benefit

How can EU be cost efficient?

- @ Manufacturing cost level, EU is not competitive
- @ Landed cost level, the case is about neutral

- Adding Circular Economy benefit (reuse of used products & components), EU becomes more competitive.

Circular Economy was the trigger
Laser cartridges Sourcing map – 2016

- Environmental direct impact (CO2 reduction)
  - Freight, eliminates 500+ oversea containers & Air shipment. Net 1 200+ T of CO2 emission reduction

- Business benefits: Customer service & Cost

- Jobs creation, about 300 jobs
  @ assembly site & @ local components suppliers, 80% operators, 20% skilled people
Laser cartridges Sourcing map – 2018

- Reduce further more CO2
  - 800 oversea containers avoidance
- Increase business benefits
- Create even more local jobs
  - 450+ jobs

Thanks to Circular Economy Benefits

European distribution center
Circular economy benefits

2017

- Remanufacture empty units
- Reuse components
- Increased customer satisfaction

Moving forward: close the loop

- Implement/replicate full dismantling
  - Maximize component reuse
  - Sort material and ship them back to component manufacturer for recycling in Lexmark products
Video @ following link:

Procurement involvement
Key take away

- Procurement positioning
- Business Case Co-ordination
  - Cost projection/estimates
  - Real Total Cost of Ownership (*taking into account the circular economy impacts*)

- Supplier selection lead
  - Country study
  - Potential suppliers identification
  - RFI/RFQ preparation
  - Cross functional team set up (total of 9 function, o/w finance, Supply Chain, Distribution, Marketing, Manufacturing, Sustainability)

- Supplier selection matrix development
- « Future state » considerations
<table>
<thead>
<tr>
<th>Attributes</th>
<th>Weight Value</th>
<th>Rating</th>
<th>Supplier Name</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest total cost with JIT capability to reduce cost</td>
<td>10.0</td>
<td>High</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Site location has low political stability issues</td>
<td>10.0</td>
<td>High</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Vendor has existing certified quality systems and is a model for quality</td>
<td>10.0</td>
<td>High</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Vendor has existing Lean/Six Sigma experience and plant site is approaching world class</td>
<td>10.0</td>
<td>High</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Site is vertically integrated for plastics and welding</td>
<td>5.0</td>
<td>Medium</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Vendor site has existing infrastructure and OHT to leverage for Lexmark product</td>
<td>5.0</td>
<td>Medium</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Ease of doing business with supplier (cultural match)</td>
<td>5.0</td>
<td>Medium</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Vendor MRP/ERP is world class and has the ability to Integration with SAP</td>
<td>5.0</td>
<td>Medium</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Vendor/Site has reverse and forward logistics capabilities (May Contain/Direct fulfillment of BTO)</td>
<td>5.0</td>
<td>Medium</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Vendor/Site has existing engineering/logistics/management capability to reduce Lexmark's dependency for local resources</td>
<td>5.0</td>
<td>Medium</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Site location and Vendor capabilities enable lowest possible value stream leadtime for a European location</td>
<td>5.0</td>
<td>Medium</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Vendor has demonstrated capability to produce daily requirements for local distribution (pull system experience)</td>
<td>5.0</td>
<td>Medium</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Cost model is transparent with vendor</td>
<td>2.3</td>
<td>Low</td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>Vendor has existing supplier network to leverage for Lexmark components</td>
<td>2.3</td>
<td>Low</td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>Vendor has the ability to integrate their MRP/ERP data and processes with SAP data and processes</td>
<td>2.3</td>
<td>Low</td>
<td></td>
<td>6.75</td>
</tr>
<tr>
<td>Vendor utilizes MES (wonderware preferred) in current operations</td>
<td>2.3</td>
<td>Low</td>
<td></td>
<td>6.75</td>
</tr>
<tr>
<td>Vendor and Site has manageable level of financial dependency on Lexmark business</td>
<td>2.3</td>
<td>Low</td>
<td></td>
<td>6.75</td>
</tr>
<tr>
<td>Vendor is global and has other capabilities for future value add activity for Lexmark</td>
<td>2.3</td>
<td>Low</td>
<td></td>
<td>6.75</td>
</tr>
<tr>
<td>Site location enables ease of commute for Lexington and local based (Hungary) resources</td>
<td>2.3</td>
<td>Low</td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>Vendor has expertise in local/geographical customs and import/export (on-site customs preferred)</td>
<td>2.3</td>
<td>Low</td>
<td></td>
<td>6.75</td>
</tr>
<tr>
<td>Site location has available skilled labor base for all necessary roles required to make Lexmark product</td>
<td>2.3</td>
<td>Low</td>
<td></td>
<td>4.5</td>
</tr>
</tbody>
</table>

Rating: 3-Good, 2-Average, 1-Below Average

Total Score: 232 245 206
PASsION
« In your Role, what can you do, initiate to better take into consideration Circular Economy aspects ? »
Thank You!

Q&A

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Academics
- Engineer
- MBA in Purchasing and Supply Chain Management
- ISM APP and CPM
- Certified Professional Coach

Experience
- 25 + years experience in various role covering most of the Supply Chain
- WW Supplier Relationship manager for the Laser Supplies manufacturing @ Lexmark

More on

Passions
- Relationship/Interaction dynamics
- Long distance Mountain running / Ultra trail

LinkedIn