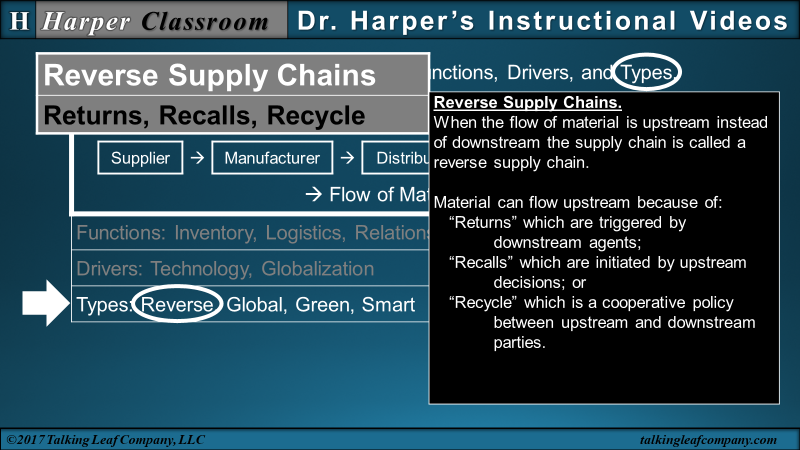
***Supply Chain Management – Reverse Supply Chain***

|  |
| --- |
| **Reverse Supply Chains.**  When the flow of material is upstream instead of downstream  the supply chain is called a reverse supply chain. |
| Material can flow upstream because of:  “Returns” which are triggered by downstream agents;  “Recalls” which are initiated by upstream decisions; or  “Recycle” which is a cooperative policy between upstream and downstream parties. |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supply Chain**:  🡨 Flow of Information 🡨   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer |   🡪 Flow of Material 🡪 |
| **Reverse Supply Chain**:  🡨 Flow of Material 🡨   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Supplier | 🡨 | Manufacturer | 🡨 | Distributor | 🡨 | Retailer | 🡨 | Customer |   . |



**Primary & Secondary Markets**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | | *Primary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer | |  |  |  |  |  |  |  |  |  | 🡪 |  |  |  |  |  | | --- | --- | --- | --- | | Evaluation & Disposition | 🡨 | Receive & Document | 🡨 |   *Reverse*  *Supply*  *Chain*   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | Disposal  Or Scrap |  | Recycle |  | Remanufacture  Or Refurbish  Or Repair |  | Reuse |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | | *Secondary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer | |  |  |  |  |  |  |  |  |  |  |   . |

|  |  |  |
| --- | --- | --- |
| Reuse | No modification.  Return to Primary or Secondary Market. | Refunds or Exchanges |
| Repair | Modifications applied.  Return to Secondary Market. | Repair or Maintenance |
| Recycle | Components, parts or material retrieved.  Provide to Secondary Market or other markets. | Spare parts or Inventory. |
| Dispose | Destroy, incinerate or scrap.  Eliminate or provide to scrap market. | Landfill. |

**Customer to Manufacturer**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |
| *Primary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer |
|  |  |  | ↑ | ← | ← | ← | ← | ← | ↓ |

**Customer to Retailer to Manufacturer**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |
| *Primary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer |
|  |  |  | ↑ | ← | ← | ← | ↓↑ | ← | ↓ |

**Customer to Third-party to Manufacturer**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |
| *Primary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer |
|  |  |  | ↑ |  |  |  |  |  | ↓ |
|  |  |  |  | ← | ← | Third-party | ← | ← |  |

**Centralized**

**Cost – Large Inventory – Lean Supply Chain – Postponement – Functional Products**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | | *Primary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer | |  |  |  |  |  |  |  |  |  | 🡪 |   **Centralized**   |  |  |  |  | | --- | --- | --- | --- | | **Evaluation & Disposition** | 🡨 | Receive & Document | 🡨 |   *Reverse*  *Supply*  *Chain*   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | Disposal  Or Scrap |  | Recycle |  | Remanufacture  Or Refurbish  Or Repair |  | Reuse |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | | *Secondary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer | |  |  |  |  |  |  |  |  |  |  |   . |

**Decentralized**

**Service – Quick Response – Agile Supply Chain – Early Differentiation – Innovative Products**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | | *Primary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer | |  |  |  |  |  |  |  |  |  | 🡪 |   **Decentralized**   |  |  | | --- | --- | | **Receive & Document Evaluation & Disposition** | 🡨 |   *Reverse*  *Supply*  *Chain*   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | Disposal  Or Scrap |  | Recycle |  | Remanufacture  Or Refurbish  Or Repair |  | Reuse |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | | *Secondary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer | |  |  |  |  |  |  |  |  |  |  |   . |

|  |  |
| --- | --- |
| **Strategic Reverse Supply Chain Management** | |
| *Opportunities* | *Barriers* |
| Increased Customer Satisfaction  Secondary Markets  Enhanced Information  Sustainability | Brand Erosion  Logistics Costs & Low Profit Margins  Coordination & Top Management Commitment  Minimal Legal Issues |

|  |  |  |
| --- | --- | --- |
| **Green**  Reverse Supply Chain  Management | **Lean**  Reverse Supply Chain  Management | **Agile**  Reverse Supply Chain  Management |