**Supply Chain Management (Reverse)**

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|  | **Reverse Supply Chain:** Material flows upstream. |  |
| **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 Market vs. Secondary Market**

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

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| Receiving & Documenting Material can be caused by: | |
| “Returns” | “Returns” which are triggered by downstream agents. |
| “Recalls” | “Recalls” which are initiated by upstream decisions. |
| “Recycle” | “Recycle” which include cooperative policies  between upstream and downstream parties. |

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| Evaluation & Disposition of Material to secondary market can include: | | |
| 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. |

**Primary Market vs. Secondary Market**

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**Customer to Manufacturer**

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

**Customer to Retailer to Manufacturer**

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| *Primary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer |
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**Customer to Third-party to Manufacturer**

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

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| **Basic Reverse Supply Chain Strategy** | | | | |
| 1.  2.  3. | Recovery Cycle Time  Recovery Cycle Cost  Recovery Asset Value |  | 1.  2. | Efficient (Lean) Chain (Centralized)  Responsive (Agile) Chain (Decentralized) |

**Centralized**

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | | *Primary*  *Market* | Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer | |  |  |  |  |  |  |  |  |  | 🡪 |   **Centralized**   |  |  |  |  | | --- | --- | --- | --- | | **Evaluation & Disposition** | 🡨 | Receive & Document | 🡨 |   *Reverse*  *Supply*  *Chain*  *Process*   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | 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**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **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 |

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| *Supply Chain Management Overview:* | | | | | | |  |
|  |  | *Supply Chain Initiatives* | | | | |  |
|  |  | Lean  (Cost,Waste) | Green  (TBL,CSR) | Resilient  (Risk) | Responsive  (Agile) | Smart  (Technology) |  |
| *Key Supply Chains* | Commodity  Supply Chain |  |  |  |  |  |  |
| Global  Supply Chain |  |  |  |  |  |  |
| Service  Supply Chain |  |  |  |  |  |  |
| **Reverse**  **Supply Chain** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | *Functions* | Inventory | Logistics | Relationships | Information | Strategy |  |
|  |  |  |  |  |  |  |  |

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| |  |  |  | | --- | --- | --- | | **Green**  Reverse Supply Chain  Management | **Lean**  Reverse Supply Chain  Management | **Agile**  Reverse Supply Chain  Management |  |  |  | | --- | --- | | **Smart**  Reverse Supply Chain  Management | **Resilient**  Reverse Supply Chain  Management |  |  |  |  | | --- | --- | --- | | **Commodity**  Reverse Supply Chain  Management | **Global**  Reverse Supply Chain  Management | **Service**  Reverse Supply Chain  Management |   . . . |

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