***Commodity Supply Chain Management***

**What is a Commodity?**

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| A basic raw material interchangeable with other raw materials of the same type.A commodity is indistinguishable (fungible) from other commodities of the same type.A commodity is commonly used in the production of other goods and/or services.A commodity has little differentiation between producers or suppliers due to standardization of quality. |

**What is a Supply Chain?**

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| “Management of Systems between Supplier and Customer”🡨 Flow of Information 🡨

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Supplier | **↔** | Manufacturer | **↔** | Distributor | **↔** | Retailer | **↔** | Customer |

🡪 Flow of Material 🡪 |

**What is a Commodity Supply Chain?**

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| “Management of Systems of interchangeable basic goods between Supplier and Customer”🡨 Flow of Information 🡨

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| RawMaterial | **↔** | Components | **↔** | FinishedProducts | **↔** | Transportation | **↔** | Consumption |

🡪 Flow of Material 🡪 |

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| **What is a Commodity?** |
| A raw material or primary good bought and sold. |
| Interchangeability (Fungibility) | Basic good often used as input to products. |
| Undifferentiation (Price) | Commodity vs. Product (differentiated by value-added) |
| Pure Competition | Commodity vs. Resource (e.g., human rights to water) |

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| **What are types of investment commodities?** |
| Tradable or investment commodities: | Examples |
| Metals | Copper, Gold, Silver, etc. |
| Energy | Natural gas, Petroleum, Coal, Renewables, etc.[Industry, Transportation, Residential, Commercial, Electric Power] |
| Agriculture | Corn, Cotton, Soybean, Wheat, etc. |
| Livestock & Meat | Cattle, Poultry, Hogs, etc. |
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| *Foreign currencies, Bandwidth, Mortgages, Staple Products, Services, etc.**Water, Health Care, Public Service, etc. (Commodity vs. Natural Resource vs. Human Right)* |

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| **What is a Commodity Supply Chain?** |
| Series of systems that acquire, produce, and provide commodities to customers. |
| Characteristics | Interconnected (Systems) |
| Low Cost (Profit) |
| High Service Level (Competition) |

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| **What is Commoditization?** |
| When a basic or primary good becomesinterchangeable,undifferentiated, anddriven by pure competition. |
|  (i.e., Equalizing the contribution between Price, Availability, Quality, Utility, etc.) |

**What are the characteristics within a commodity supply chain?**

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| --- | --- | --- |
| Metals |  | Copper, Gold, Silver, etc. |
| Energy |  | Natural gas, Petroleum, Coal, Renewables, etc. |
| Agriculture |  | Corn, Cotton, Soybean, Wheat, etc. |
| Livestock & Meat |  | Cattle, Poultry, Hogs, etc. |

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| **Stages of a Supply Chain** |
| 🡨 Flow of Information 🡨

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sourcing | **↔** | Production | **↔** | Storing | **↔** | Shipping | **↔** | Demand |

🡪 Flow of Material 🡪 |
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|  | Sourcing [SRM, Supplier Relationship Management] |  |
|  |  | Production [OM, Operations Management] |  |
|  |  |  | Storing [WMS, Warehouse Management System] |  |
|  |  |  |  | Shipping [TMS, Transportation Management System] |  |
|  |  |  |  |  | Demand [CRM, Customer Relationship Management] |  |
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| ***Supply Chain Stages*** |
|  |  | *Supply Chain Characteristics* |  |
|  | **(Metals)****(Energy)****(Agriculture)** | Lean(Cost,Waste) | Green(TBL,CSR) | Resilient(Risk) | Responsive(Agile) | Smart(Technology) |  |
| *Supply Chain Stages* | Sourcing*[SRM]* |  |  |  |  |  |  |
| Production*[OM]* |  |  |  |  |  |  |
| Storing*[WMS]* |  |  |  |  |  |  |
| Shipping*[TMS]* |  |  |  |  |  |  |
| Demand*[CRM]* |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | *Functions* | Inventory – Logistics – Relationships – Information – Strategy |  |
|  |  |  |  |  |  |  |  |
|  | *Drivers* | Analytics – Globalization – Sustainability |  |
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