Case Study 2

Green Supply Chain
China’s Green Supply Chain Pressure

As a modern management model, the green supply chain management is brought forward to

- Meet the development of economic globalization,
- Improve the enterprise's competitiveness,
- Meet the requirements of human society for sustainable development.

However, the green supply chain management in China has encountered substantial problems such as

- Lack of legal system construction,
- Information asymmetry
- Technological bottleneck
- etc.
1. Lack of sound government's legal system construction

- **United States:**
  - A special environmental protection agency in 1976 to purchase regenerated products and products with environmental protection treating process on behalf of the government.
  - Two regulations about the electronic rubbish were published in **August of 2004**.

- **China:**
  - The research of the green supply chain management just started.
  - No perfect legal system to regulate and supervise the behavior of enterprises.
  - There is a lack of effective supervision.

**Examples:**
The existing rate of pollution charge is far below the expense of comprehensive treatment of pollution. **Enterprises would choose to pay the pollution charge directly** for the sake of the cost, rather than manage the pollution.
It is legal to externalize the manufacturing cost, which can increase the profit of the manufacturer, although it results in conflicts between the individual goal of the supply chain members and the unitary goal of the green supply chain, violating the principle of compatible environment.
2. The information asymmetry among the enterprises in the supply chain

- Each role in the supply chain must be environmentally and effectively managed, ensuring the environment effect and consumption of resources in each stage of the product life cycle are valid controlled.

- Furthermore, the environment management of the whole supply chain needs coordination to make it have least environment effect and resource consumption on the basis of sharing information about the systematic environment of the supply chain.

- It is proved by some multinational enterprises such as Lucent Technologies and Dell computer company, etc. that information sharing of supply chain is able to create values which can also be achieved by small and medium-sized companies.

- However, some business entities in our country block news and even disseminate false news through legal or illegal ways to maximize their own profit and put themselves in a favorable position in the competition and transaction.
3. Lack of sound green technology

Different from traditional supply chain model, green supply chain model emphasizes the effective integration of green design, green material, green technics, green packaging and green recycle in the life cycle of products, which broaden the content and increase the difficulty of the supply chain management. At the same time, it requires enterprises to make the overall innovation and upgrading of technology.

- The size of our manufacturing enterprise is relatively small.
- Our supply chain technology is far below the green requirements.
- The material used in the supply chain is also not in accordance with the requirements of reusable and degradable material.
Please watch the video 1:
Discussion 1:

- Q1: How to define a “Green Supply Chain”, by your own understanding? How many aspects should be considered?

- Q2: What might be the steps of checking up and rebuilding a Greener and Cleaner Supply Chain?

Group discussion: 20 minutes
Steps to a greener, more sustainable electronics supply chain

- Step 1: Redesign the product
- Step 2: Reconfigure manufacturing
- Step 3: Shift to green suppliers

Figure 1: In the above illustrative scenario, the number of tons of carbon dioxide emitted per ton of the same processed steel varies by provider.
Step 4: Shorten distances
Step 5: Alter service level agreements
Step 6: Shrink packaging
Step 7: Plan for reverse supply chain activity
  ◦ Product recalls, upgrades and refurbishments require some kind of reverse supply chain. Planning for these events up front can help you eliminate or reduce unacceptably high energy costs and environmental impact later. How products are designed, assembled, labeled and packaged can have a profound effect on the efficiency of any reverse supply chain.
Step 8: Consolidate shipments
Step 9: Plan shorter routes
  ◦ There’s an art to planning distribution routes and choosing the right transportation modes.
Step 10: Coordinate with partners
Step 11: Take a lifecycle view
Step 12: Start now
Q3: If you are a LED manufacturer, what steps you might take to build up a Green Supply Chain?

(consider all the aspects, including: design, materials selection, how to choose greener vendors, and how to be a greener-supplier)
Please watch the video 2: