

Scenario:

A large company that designs and sells blue jeans in the U.S. recently received some bad publicity. The bad publicity started when a report was released showing how high employee turnover is; the company loses dozens of employees every month. More recently, an environmental watchdog group named the company as a “climate menace,” alleging that it had one of the highest carbon footprints of any similar-sized company. To top it all off, one city is now trying to prohibit the company from locating a new store there, claiming that the company does not appear to care about the communities where it does business.

You have been hired as a consultant to help the company improve its distribution system. That means you will have to investigate the procedures involved in getting the jeans from the factory where they are made into consumers’ hands. The company wants to:

- Lower its carbon footprint
- Retain good employees
- Positively contribute to local economies

Your task is to determine where and how you can improve distribution according to these three goals. First, you need to know how the company currently operates.

Your investigation begins in Vietnam, where the jeans are sewn. Because the company wants to provide its customers with the latest styles, it flies shipments of the jeans from Vietnam to an airport in Denver at least once a month.

In Denver, the jeans arrive at your company’s distribution center. This is essentially a giant warehouse. The jeans are then loaded onto trucks that travel all over the United States and Canada, delivering the jeans to stores. Turnover among the truck drivers is pretty low. They work long hours but make good money. Some of them are members of a union that works to protect their rights; the union established minimum pay rates and maximum working hours for the drivers.

Once the jeans arrive at any of the forty-five retail stores your company owns, they are carefully folded and displayed by retail workers. Most of these workers are young and willing to work part-time. This is cheaper for the company because it does not offer health care and other benefits, such as paid sick days and vacation time, to part-time

employees. Usually store managers are the only retail employees who work full time and receive health care. The part-time retail employees, who work between 8 and 32 hours a week, earn anywhere from \$7.50 to \$12 an hour.

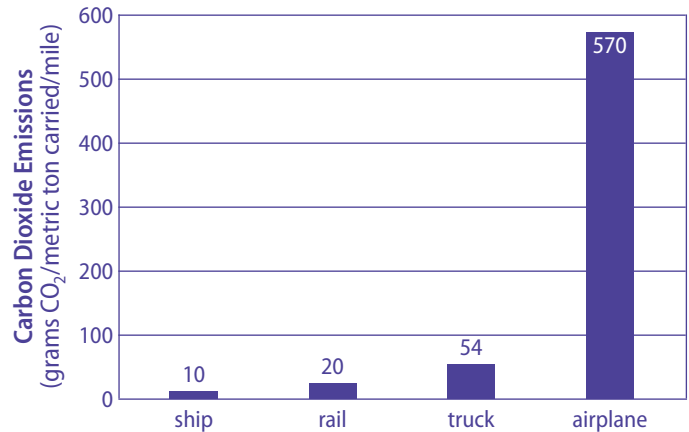
More than half of the stores are located in suburban areas, in large shopping centers. Currently about 20% of the company’s entry-level retail positions are vacant. One reason is that people looking for this type of work often live far from shopping centers in places without public transportation options, like buses or trains. 30% of the company’s retail employees live more than 15 miles from the stores where they work. In several cities, there are large numbers of unemployed workers in inner-city areas that cannot reach the company’s suburban stores.

Four stores currently participate in recycling programs. These stores, located in cities that have established recycling programs, recycle the cardboard boxes that the jeans arrive in.

Transportation is responsible for 17% of the world's carbon dioxide (CO₂) emissions, second only to electricity and heat production in the amount of greenhouse gases released.¹ The vast majority of transportation fuels (such as gasoline, diesel, and jet fuel) are made from petroleum. When petroleum fuels are burned, carbon dioxide is released.

Carbon dioxide is a greenhouse gas linked to climate change. As the amount of carbon dioxide in the atmosphere goes up, so does the earth's average temperature. Climate change has warmed the earth so that glaciers and areas that have been frozen for thousands of years are now melting. It has also caused sea levels to rise around the world.

Greenhouse Gas Emissions from Transportation²



Greenhouse Gas Emissions from Solid Waste³

Recycling and Source Reduction	Emissions Prevented
2000 pounds cardboard recycled	3.1 metric tons of CO ₂
2000 pounds cardboard source reduction	5.6 metric tons of CO ₂

Employee Wages⁴

People in Family	1	2	3	4	5	6	7	8
Poverty Guidelines	\$10,830	\$14,570	\$18,310	\$22,050	\$25,790	\$29,530	\$33,270	\$37,010

¹ Samantha Putt del Pino, Ryan Levinson, and John Larsen, "Hot Climate, Cool Commerce: A Service Sector Guide to Greenhouse Gas Management" (Washington, D.C.: World Resources Institute, 2006), 5. <http://pdf.wri.org/hotclimatecoolcommerce.pdf>

² Estimates in the graph based on the Greenhouse Gas Protocol Initiative, as cited by Nelly Andrieu and Lee Weiss in "Transport Mode and Network Architecture: Carbon Footprint as a New Decision Metric," June 2008, Thesis (Master of Engineering in Logistics), Massachusetts Institute of Technology.

³ U.S. Environmental Protection Agency, "Measuring Greenhouse Gas Emissions from Waste," www.epa.gov/climatechange/wywd/waste/measureghg.html (accessed March 29, 2010). "Source reduction" refers to eliminating use of cardboard to begin with.

⁴ U.S. Department of Health and Human Services, "The 2009 HHS Poverty Guidelines," <http://aspe.hhs.gov/poverty/09poverty.shtml> (accessed March 18, 2010). The HHS poverty guidelines are used by a number of federal programs, such as Head Start and the National School Lunch Program, to establish who is eligible to receive these programs that serve people living in poverty.

Distribution Recommendations

Group members: _____

Guiding Question: As a consultant, what recommendations would you make to improve the distribution system according to the considerations below?

1. Carbon Footprint

In what ways could the company reduce its carbon footprint (its CO₂ emissions) during distribution? List at least two ideas, and explain how each results in a lower carbon footprint.

2. Worker Retention

In what ways could the company retain its employees for longer periods of time? List at least two ideas, and explain why each promotes greater employee retention.

3. Local Economies

In what ways could the company contribute more positively to local economies where its stores are located? List at least one idea, and explain how it contributes to local economies.

4. What challenges might a company face when considering a sustainable approach to improving its system of distribution?
