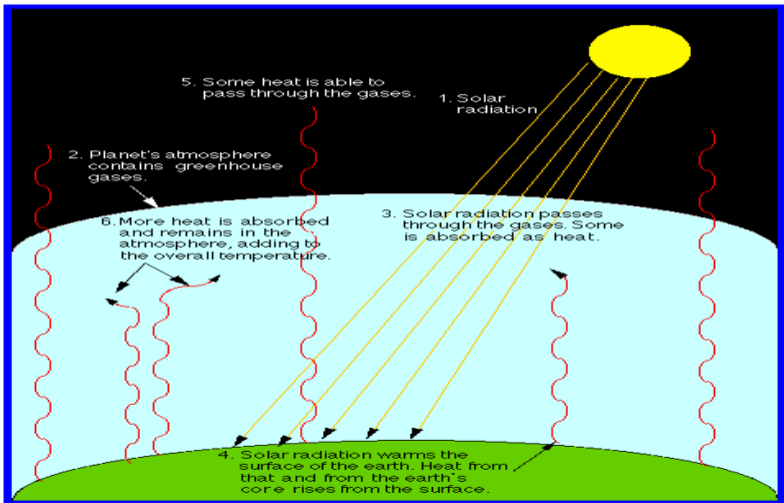
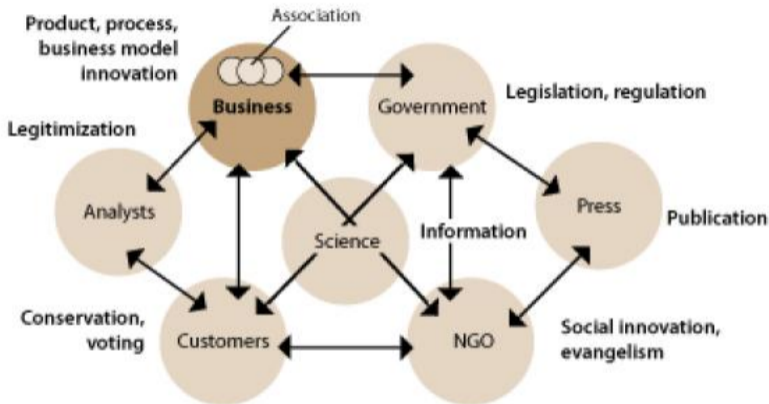


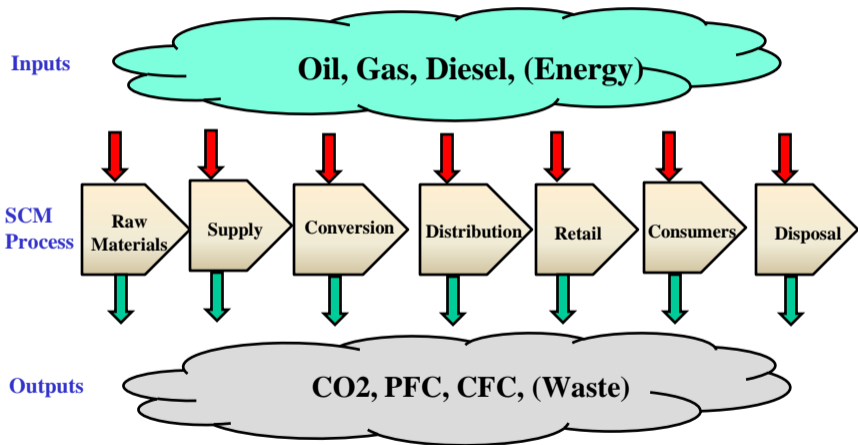
CHAINalytics

Reducing Your Carbon Footprint: A Practical Guide

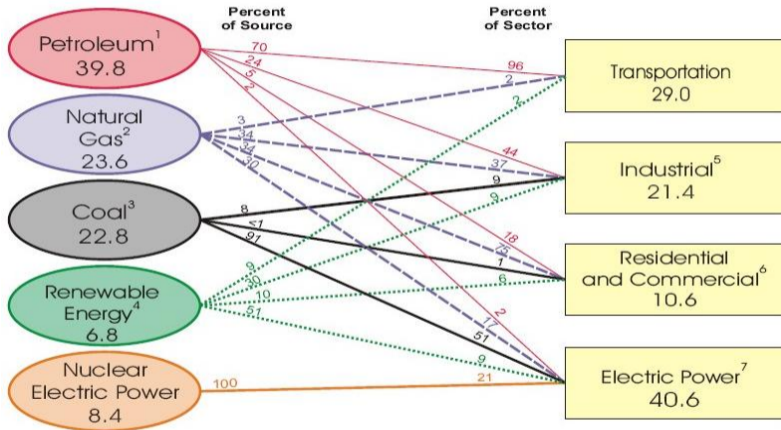
August 18, 2008





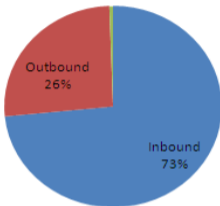


Quadrillion BTU

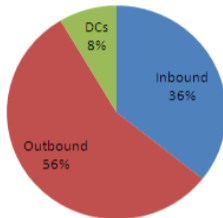


DCs
1%

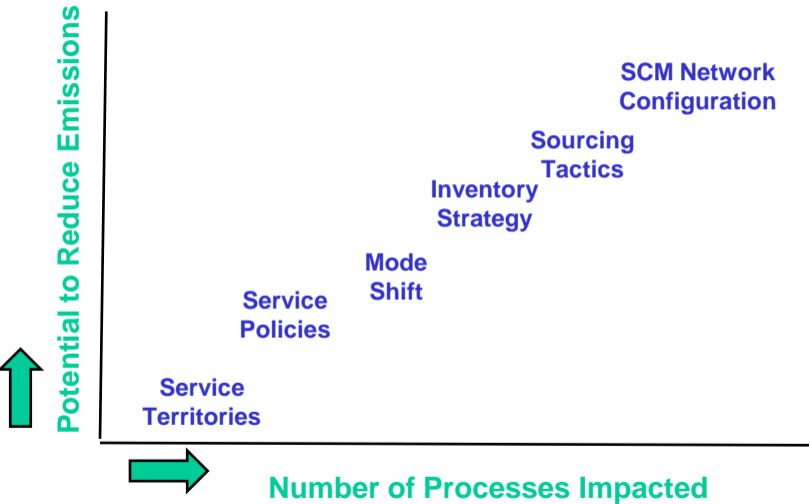
Company A

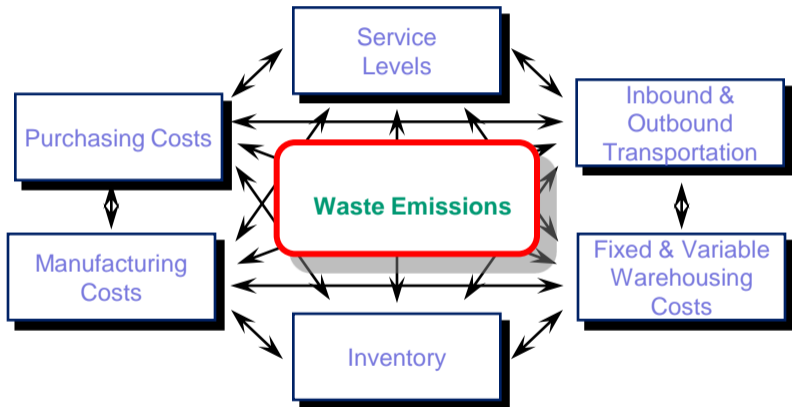


Company B



	Company A	Company B
Industry	Foodservice Distribution	Consumer Electronics
Revenue Million \$	4,000	4,000
Logistics Spend (Post Mfg.) Million \$	410	186
SKU's	900	5,500
Turns	40	14
Product Value	Low	High
Distribution Tiers	Multiple	Single
Sourcing	Regional/Local	Global
# of DCs	87	3





Carbon Footprint Reporting

Measure End-to-End Carbon Emissions of Network: Each Scenario

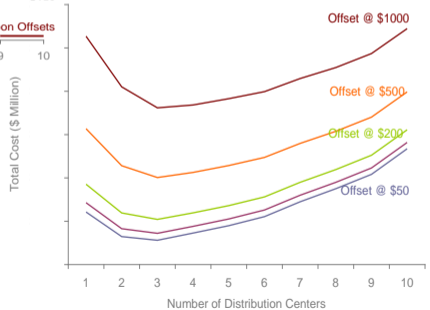
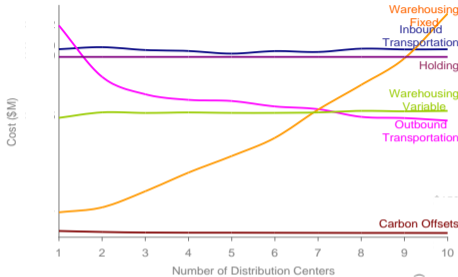
Constraining Carbon Emissions

Incorporate Upper Limit on Carbon Emissions in Optimization

Carbon Emissions as a Cost

Apply a Cost to Carbon Emissions and Incorporate in Model

- Understand Corporate Goals for Emissions Analysis and Reduction
- Define Span of Supply Chain Control and Influence
- Establish Practical Methods to Estimating Network Emissions
 - Top Down vs Bottom Up
 - Use of Government Information and Other Sources



State Specific Emissions from Electrical Production

State	kg CO ₂ /kWh	State	kg CO ₂ /kWh
Alabama	0.594	Montana	0.649
Alaska	0.626	Nebraska	0.635
Arizona	0.476	Nevada	0.689
Arkansas	0.585	New Hampshire	0.308
California	0.277	New Jersey	0.322
Colorado	0.875	New Mexico	0.916
Connecticut	0.426	New York	0.390
Delaware	0.830	North Carolina	0.562
Florida	0.630	North Dakota	1.016
Georgia	0.621	Ohio	0.816
Hawaii	0.753	Oklahoma	0.780
Idaho	0.014	Oregon	0.127
Illinois	0.526	Pennsylvania	0.571
Indiana	0.943	Rhode Island	0.476
Iowa	0.853	South Carolina	0.376
Kansas	0.762	South Dakota	0.363
Kentucky	0.912	Tennessee	0.590
Louisiana	0.535	Texas	0.662
Maine	0.385	Utah	0.875
Maryland (inc.	0.621	Vermont	0.014
Massachusetts	0.580	Virginia	0.526
Michigan	0.717	Washington	0.113
Minnesota	0.689	West Virginia	0.898
Mississippi	0.585	Wisconsin	0.744
Missouri	0.834	Wyoming	0.975

Larry Lapide of MIT identifies six popular supply chain management practices that promote generous oil consumption.

- 1. Just-in-Time Manufacturing***
- 2. Offshore Sourcing***
- 3. Cycle Time Reduction***
- 4. More Oil-Based Materials ...***
- 5. ... and Packaging***
- 6. The Rise of E-Retailing***



Q&A