

# Green Logistics

## Approccio Quantitativo

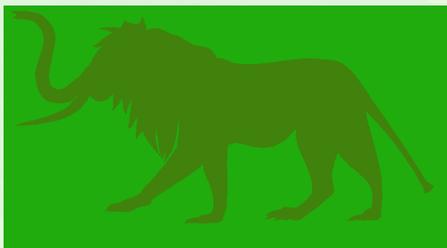
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# Green Logistics: un Approccio Quantitativo

Dato un anello della Supply Chain o un particolare elemento diventa importante definire gli indicatori che misurano l'impatto sull'ambiente della Logistica

Questo al fine di procedere nel miglioramento tramite linee d'azione differenti:

- Miglioramenti in termini Efficienza Tecnologica
- Miglioramenti in termini Efficienza Operativa
- Evoluzione Verso nuove Soluzioni piu` Efficaci



# Commodity Based Approach

Nella Supply Chain si puo` operare in differenti modalita` per migliorare il processo per esempio ragionando trasversalmente:

- Life Cycle Analysis: Confronto dei flussi di energia, emissioni legati ai trasporti, alla produzione e distribuzione
- Spatial Redistribution: Riorganizzazione sulla base di una aggregazione differente
- Involvement of new stakeholders: Sharing trasversale e Longitudinale nella Supply Chain per Migliorare il Processo

Comparison of production and transportation energy use by commodity group (10<sup>15</sup> J (PetaJ))<sup>a</sup> *Survey USA/UK 2000*

	Production	Transportation	Ratio
<i>Directly comparable</i>			
Fabricated metal products	324	81	4.0
Transport equipt	341	117	2.9
Pulp/paper	2644	187	14.1
Primary metal products	2603	172	15.1
Petroleum/coal products <sup>b</sup>	2319	228	10.2
Lumber/wood products	476	308	1.5
Chemicals <sup>b</sup>	1963	269	7.3
Food/kindred products	1009	609	1.7
Textile mill products	289	37	7.8
Apparel and textile prods	46	32	1.5
Total (comparable only)	12014	2040	5.9
<i>Not directly comparable</i>			
Coal	NA <sup>c</sup>	151	NA
Farm products	NA	265	NA
Nonmetallic minerals	NA	227	NA
Industrial machinery and equipment	250	NA	NA
Electric/electronic equipt.	224	NA	NA
Machinery and computers	NA	51	NA



# Ambiente: Come e Quando

General importance of environmental issues (percentage of respondents)	Environmental policies (percentage of respondents)		Survey USA 2003		
	Non-US	US	Non-US	US	
<i>Current importance</i>			<i>Type of environmental policy</i>		
Slight	9.1	3.8	None	9.2	8.5
Moderate	36.4	36.1	Informal	16.7	30.0
High	54.5	60.2	Formal	74.1	61.5
<i>Future importance</i>			<i>Decade of implementation</i>		
Increase	76.4	88.2	1990s	44.0	21.6
Remain the same	20.0	13.5	1980s	42.0	59.5
Decrease	3.6	2.2	1970s and before	14.0	18.9





# Motivazioni per Lavorare sulla Green Logistics

In effetti la sensazione che le normative fossero il principale motore per la Green Logistics era una realta'.

Tuttavia oggi esistono opportunita` per sviluppi in questo settore

Major reasons for environmental policies (percentage indicating "yes")		<i>Survey USA 2003</i>
Reason	US participants	Non-US participants
Compliance with government regulations	84	95
Control environmental costs	70	76
Societal expectations	66	65
Minimize liability	63	49
Profit opportunities	22	35
Keep up with competitors	15	20





# Fattori Ambientali e Percezione della Loro Importanza....

Quali sono le piu` popolari e piu` impopolari Strategie in uso per gestire e rispondere alle Questioni Ambientali

Importance of environmental issues (percentage of respondents) Survey USA 2003

Issue	Minimal importance	Moderate importance	High importance
Energy conservation	<i>21.8</i>	<i>29.1</i>	<i>49.2</i>
Materials conservation	10.7	40.5	48.9
	32.7	23.6	43.7
Efficient land usage	21.5	38.5	40.0
	49.1	29.1	21.8
Reducing congestion	34.1	29.5	36.4
	39.6	30.2	30.2
Reducing air pollution	33.9	43.3	22.8
	34.5	29.1	36.4
Reducing water pollution	21.1	28.9	50.0
	30.1	27.8	42.1
Reducing visual pollution	18.1	23.6	58.3
	51.8	24.1	24.1
Reducing odor pollution	27.2	36.4	36.4
	49.1	20.0	30.9
Reducing noise pollution	26.0	36.2	37.8
	37.0	42.6	20.4
Solid waste disposal	31.5	37.9	30.6
	3.8	26.9	69.3
Hazardous waste disposal	7.8	27.9	64.3
	22.2	22.2	55.6
	18.9	15.0	66.1

Notes: italics indicates non-US respondents; normal font indicates US respondents;





# ... nella LOGISTICA

Quali sono le piu` popolari e piu` impopolari Strategie in uso per gestire e rispondere alle Questioni Ambientali nella **LOGISTICA**

Impact of environmental issues on logistics functions (percentage of respondents) Survey USA 2003

Issue	Minimal impact	Moderate impact	Significant impact
Transportation	16.4	36.4	47.2
	17.3	41.4	41.4
Warehousing	38.9	42.6	18.5
	35.3	36.8	27.8
Materials handling	35.2	48.1	16.7
	38.6	40.9	20.5
Packaging	1.8	31.9	66.3
	10.5	28.6	60.9
Inventory control	67.3	21.8	10.9
	65.6	29.8	4.6
Order processing	78.2	18.2	3.6
	80.3	15.2	4.5
Purchasing	29.0	45.5	25.5
	27.3	45.5	27.3
Demand forecasting	64.8	29.6	5.6
	80.3	17.4	2.3
Facility location	61.2	29.1	9.7
	42.1	33.1	24.8
Customer service	63.6	20.0	16.4
	63.6	22.0	14.4
Production scheduling	67.9	24.5	7.6
	83.5	13.5	3.0
Salvage and scrap disposal	12.7	23.6	63.7
	9.0	20.3	70.7
Return goods handling	29.1	36.4	34.5
	36.1	33.8	30.1
International logistics	44.4	37.0	18.6
	45.4	25.4	29.2

Notes: italics indicates non-US respondents; normal font indicates US respondents



# Valutare le Strategie in Uso e quelle piu` Promettenti

Nella Green Logistics si pone la necessita' di condurre una analisi su quelle che sono le linee di sviluppo in essere ed una valutazione della loro efficacia

Strategies for managing and responding to environmental issues (percentage of respondents)		
Strategy	Currently using	Not currently using
Reduce consumption whenever possible	81.8	18.2
	80.9	19.1
Reuse materials whenever possible	73.2	27.8
	74.4	25.6
Recycle materials whenever possible	75.9	24.1
	85.6	14.4
Redesign logistical system components for greater environmental efficiency	54.5	45.5
	43.2	56.8
Reject suppliers who lack environmental concerns	22.8	77.2
	29.2	70.8
Increase education and training of company personnel	55.5	45.5
	51.1	48.9
Encourage greater governmental involvement/ regulation	18.2	81.8
	15.7	84.3
Publicize environmental efforts/accomplishments	48.1	51.9
	54.1	45.9
Promote industry cooperative efforts	55.5	45.5
	42.0	58.0
Conduct environmental audits	64.8	35.2
	56.4	43.6
Use outside or third parties to manage environmental issues	28.8	71.2
	29.7	70.3
Hire/promote more environmentally conscious personnel	18.5	81.5
	24.6	75.4



Note: Italics indicate non-US respondents; normal font indicates US respondents Survey USA 2003



# Green Logistics: un Survey per Contestualizzare

Risulta importante creare un framework della situazione sulle nostre realta`

- 1) Quali sono le piu` popolari e piu` impopolari Strategie in uso per gestire e rispondere alle Questioni Ambientali nella Logistica
- 2) Quali Relazioni, se ve ne sono, esistono tra le caratteristiche dell'azienda e le strategie per gestire e rispondere alle questioni Aziendali



Strategies for Managing and Responding to Environmental Issues			
Strategy	Percentage of respondents		
	Currently use	Plan to use	No plans to use
Recycle materials whenever possible	82.8	10.2	7.0
Reduce consumption whenever possible	81.2	11.3	7.5
Reuse materials whenever possible	73.8	12.8	13.4
Conduct environmental audits	58.8	18.2	23.0
Publicize environmental efforts/accomplishments	52.4	21.4	26.2
Increase education and training of company personnel	52.1	36.7	11.2
Redesign logistical system components for greater environmental efficiency	46.5	37.4	16.0
Promote industry cooperative efforts	45.9	23.8	30.3
Use outside or third parties to manage environmental issues	29.5	11.5	59.0
Reject suppliers who lack environmental concerns	27.0	30.3	42.7
Hire/promote environmentally conscious personnel	22.8	22.2	55.0
Encourage greater governmental involvement/regulation	16.5	11.2	72.3

2000 Survey North America





# References



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