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La trasformazione della Supply Chain: quali sono i fattori critici oggi?

Sergio Gimelli
Sales Consulting Director
Oracle Italy

Fabbrica Futuro
Bologna, 6 Marzo 2013

Source: Fraunhofer-Gesellschaft

Un test….

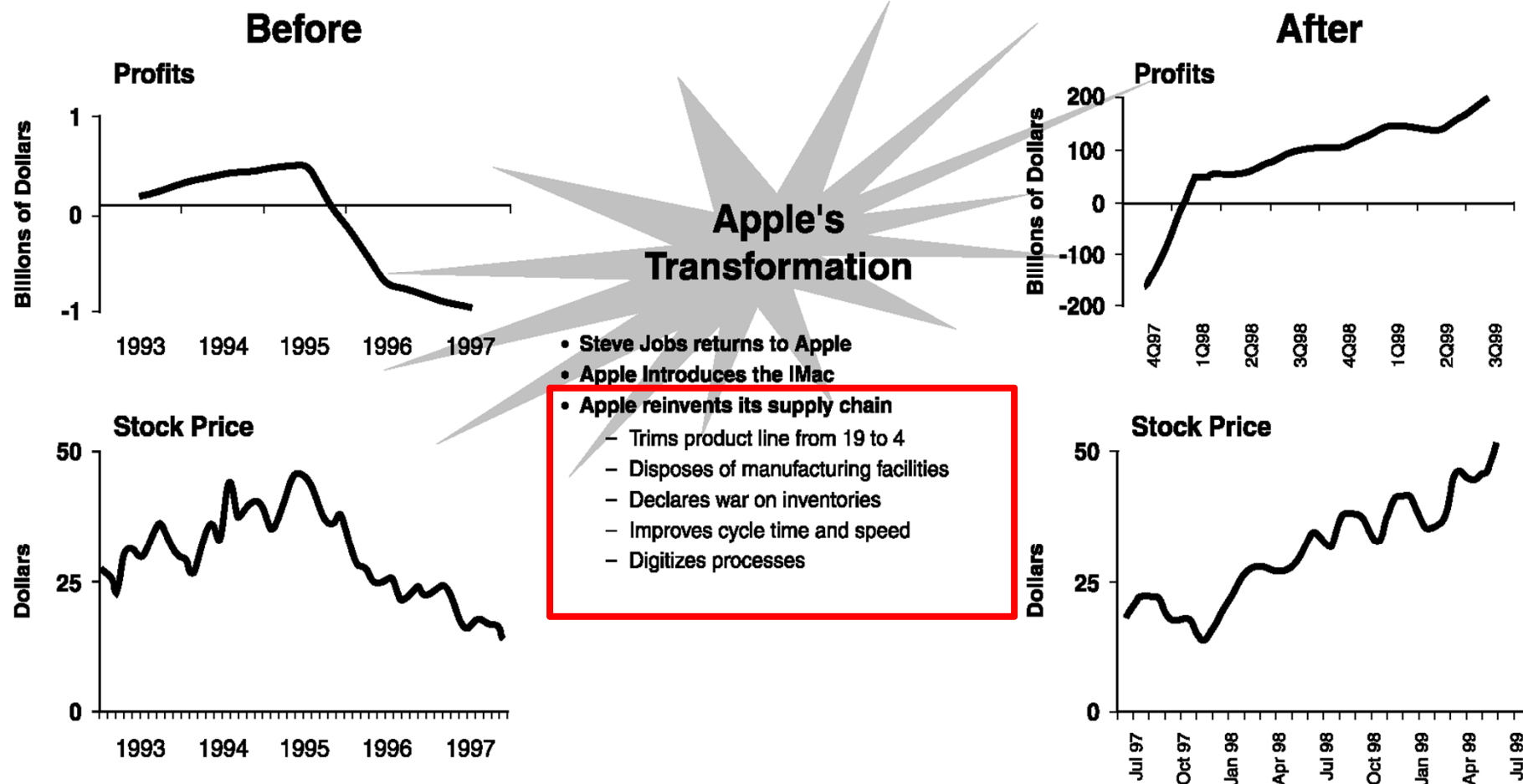# Tim Cook, CEO Apple

Tim Cook
CEO

Tim Cook is the CEO of Apple and serves on its Board of Directors.

Before being named CEO in August 2011, Tim was Apple's Chief Operating Officer and was responsible for all of the company's worldwide sales and operations, including end-to-end management of Apple's supply chain, sales activities, and service and support in all markets and countries. He also headed Apple's Macintosh division and played a key role in the continued development of strategic reseller and supplier relationships, ensuring flexibility in response to an increasingly demanding marketplace.

Prior to joining Apple, Tim was vice president of Corporate Materials for Compaq and was responsible for procuring and managing all of Compaq's product inventory. Previous to his work at Compaq, Tim was the chief operating officer of the Reseller Division at Intelligent Electronics.

La Trasformazione di Apple

Before

Profits

Stock Price

Mercer Management Consulting © 1999

Apple's Transformation

- Steve Jobs returns to Apple
- Apple Introduces the IMac
- Apple reinvents its supply chain
  - Trims product line from 19 to 4
  - Disposes of manufacturing facilities
  - Declares war on inventories
  - Improves cycle time and speed
  - Digitizes processes

After

Profits

Stock Price

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Gartner Announces Rankings of Its 2011 Supply Chain Top 25

Apple Maintains the Top Position for Fourth Year in a Row

SCOTSDALE, Arizona, June 2, 2011—

Gartner, Inc. has released the findings from its seventh annual Supply Chain Top 25. The goal of the Supply Chain Top 25 research initiative is to raise awareness of the supply chain discipline and how it impacts the business.

Analysts announced the findings from this year's research at the Gartner Supply Chain Executive Conference (http://www.gartner.com/technology/summits/na/supply-chain/), which is being held here at The Phoenician Resort & Spa through June 3.

"Four key themes emerged this year among the leaders, including how they deal with volatility, their approaches to value chain network integration, their focus on sustainable execution and their abilities to orchestrate," said Debra Hofman, research vice president at Gartner.

Gartner analysts said one of the trends they've seen over the last several years is a move from the notion of "supply chain" to "value chain" and a concomitant increase in the span of control of the supply chain organization.

"The old image of a supply chain organization limited to either inbound materials management or logistics, with procurement, planning, manufacturing, and customer service as totally separate functions, is fading," Ms. Hofman said. "What's replacing it is a supply chain organization, often reporting at the board level, that includes the functions of plan, source, make and deliver. It also increasingly includes functions such as customer service and new product launch, and links them through the cross-functional processes and roles that are so critical to being demand-driven. The consumer-oriented companies, with their need to renew product lines constantly and their appetite for downstream data, have led the way in this change, which may at least partially explain the steady drift away from industrial companies making the list."

Apple held onto the No. 1 position for the fourth year in a row (see Table 1). The company continued to post strong financials and top-of-the-line voting scores. Research In Motion, which was new to the list last year, rose to No. 4 this year with enviable financials and solid votes. Amazon, another newcomer last year, rose five spots to No. 5 in the 2011 ranking. Colgate-Palmolive, rising steadily since 2009, moved to No. 13 this year.

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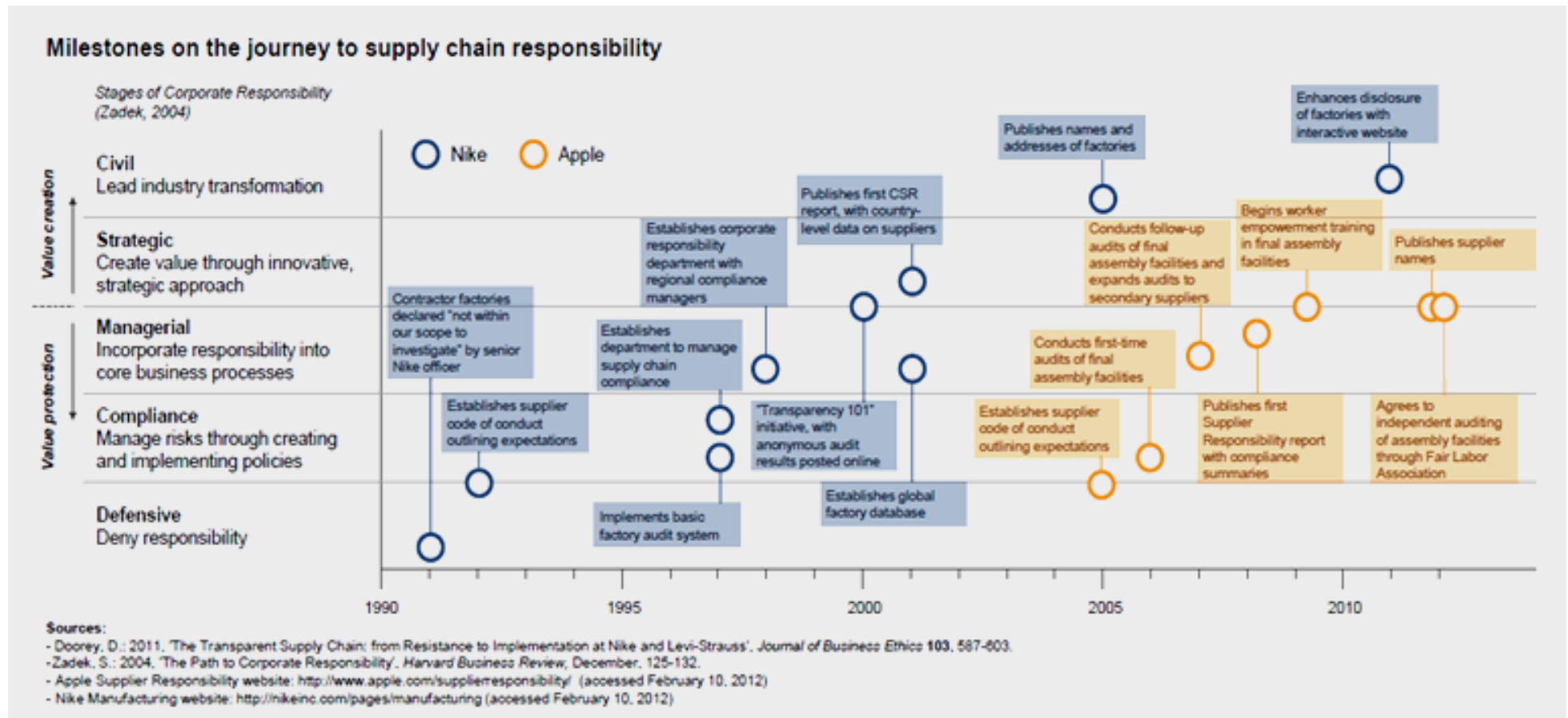
2012 Press Releases
2011 Press Releases
2010 Press Releases
2009 Press Releases
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Table 1: The Gartner Supply Chain Top 25 for 2011

Rank	Company	Peer Opinion [1] (156 Voters) (25%)	Gartner Opinion [1] (32 Voters) (25%)	Three-Year Weighted ROA [2] (25%)	Inventory Turns [3] (15%)	Three-Year Weighted Revenue Growth [4] (10%)	Composite Score [5]
1	Apple	2,950	536	17.9%	49.3	40.9%	8.50

Source: http://www.gartner.com/it/page.jsp?id=1710016

La Supply Chain "Responsibility"
Dalla protezione del valore alla creazione del valore

Milestones on the journey to supply chain responsibility

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L'eccellenza operativa, oggi, e' sufficiente?

Nuove capacita' di differenziazione
....eccellenza operativa condizione necessaria ma non sufficiente

Le performance delle Supply Chain nei mercati emergenti sono comparabili con quelle dei mercato maturi

EBIT margin [avg.]

+22%

11% — Mature
14% — Emerging

Inventory turns [avg.]

-7%

8.4 — Mature
7.8 — Emerging

Delivery performance [avg.]

-4%

90% — Mature
86% — Emerging

Differentiating supply chain capabilities [avg.]

0%

44% — Mature
44% — Emerging
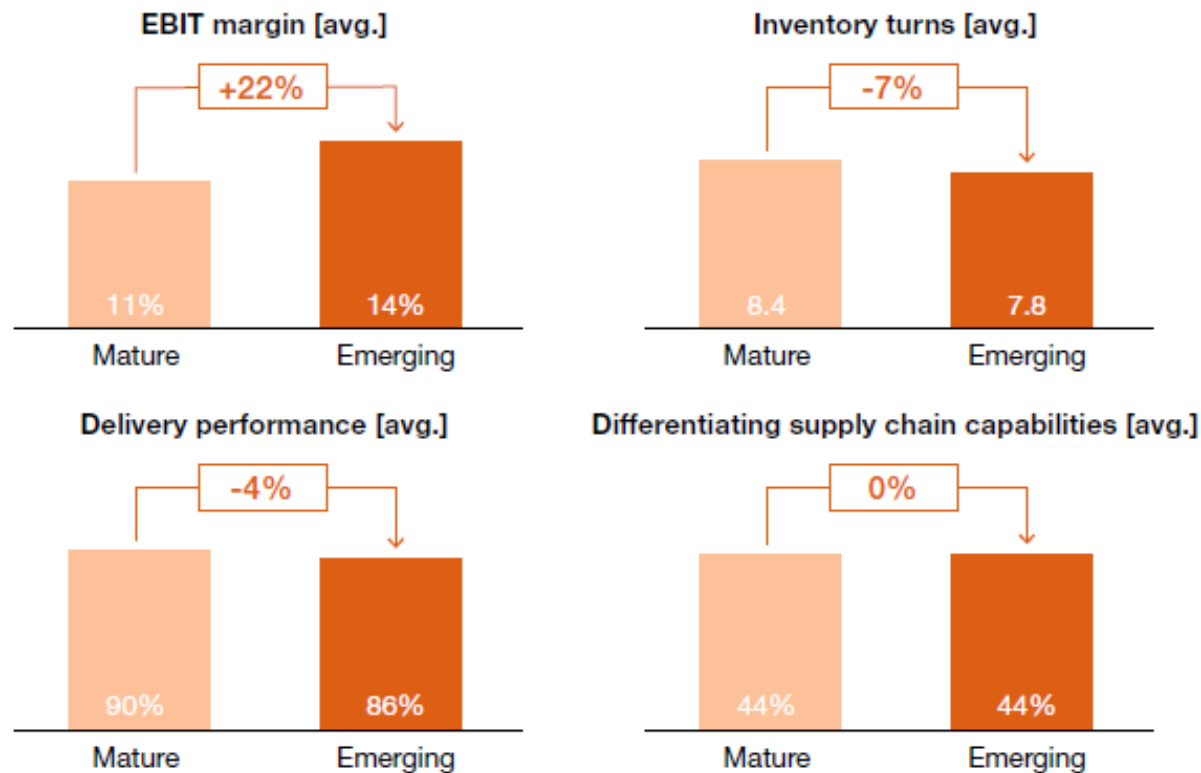
Based on participant's country of origin.

Source: PwC, *Global Supply Chain Survey 2013*

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Supply Chain Agenda
....andare oltre i tradizionali progetti di ottimizzazione

	2013				2012
1	Supply chain visibility improvement	+2 ▲		1	Operational excellence
2	Reducing environmental footprint	New ★		2	Contract renewal with Logistics Service Provider (LSP)
3	Operational excellence	-2 ▼		3	Supply chain visibility improvement
4	Network redesign/ Distribution strategy	+4 ▲		4	Business innovation
5	Supply chain collaboration	+5 ▲		5	Improve long term forecasting/ planning
6	Contract renewal with Logistics Service Provider (LSP)	-4 ▼		6	Centralising or decentralising supply chain
7	Sales and Operations Planning (S&OP)	0		7	Sales and Operations Planning (S&OP)
8	Lean warehousing	New ★		8	Network redesign/ Distribution strategy
9	Inventory optimization program	New ★		9	Supply chain talent program
10	Improve long term forecasting/ planning	-5 ▼		10	Supply chain collaboration

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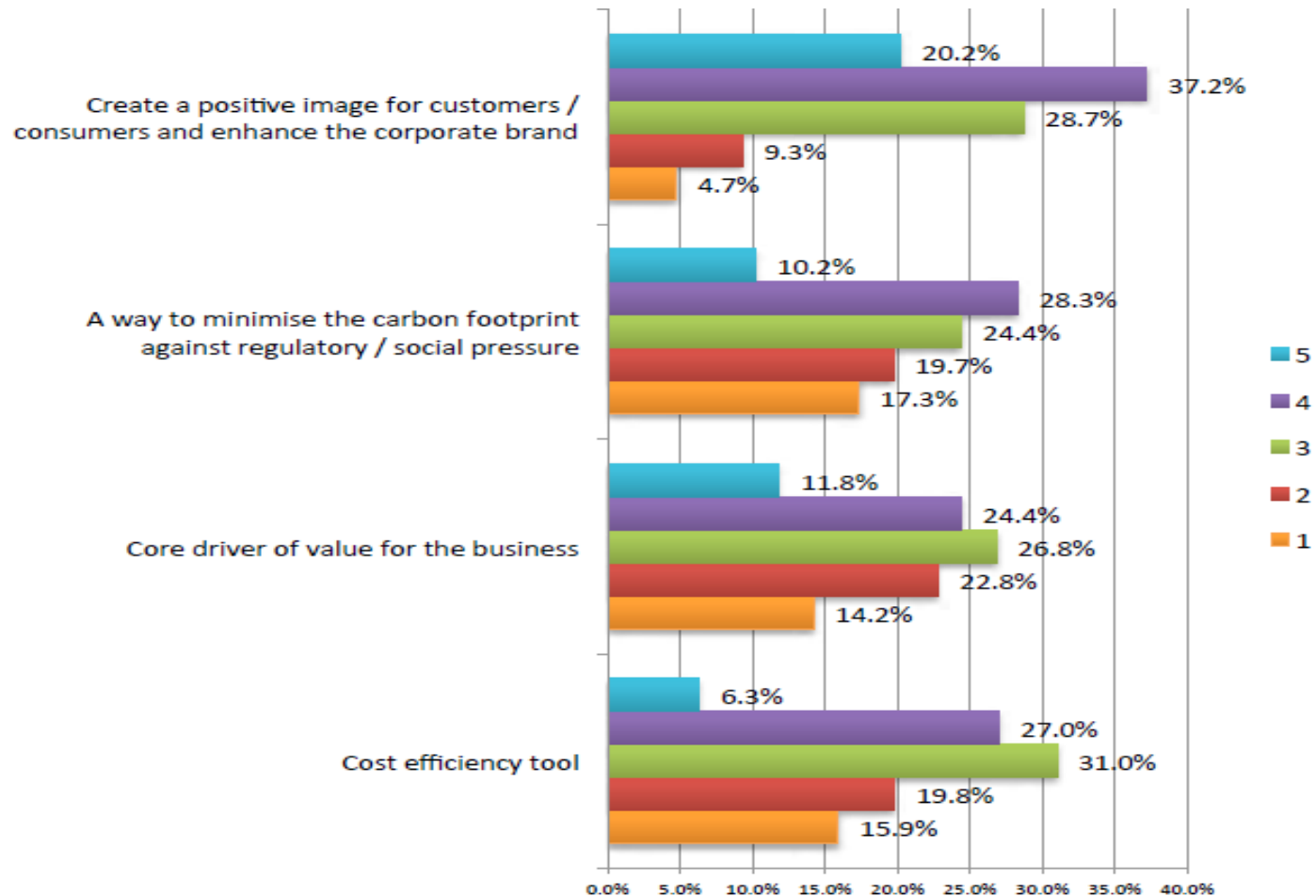# La sostenibilità è "solo" protezione del marchio?

Fig.17 – On a scale of one to five, where one is not applicable and five is extremely applicable, rank the following as a means of describing the role sustainability plays for your business

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Perche' la Green Supply Chain e' importante
....Qualche cifra

- 75% del *"Carbon Footprint"* di una impresa proviene dalla sua Supply Chain

- Il trasporto merci contribuisce per un terzo all'emissione totale di CO_2 proveniente dai trasporti

- Treni Merce e Camion (VUOTI!) contribuiscono per circa il 20% delle emissioni

- In Europa il trasporto merci e' destinato ad aumentare del 50% dal 2000 al 2020

- Oltre il 25% di mezzi pesanti gira vuoto ogni anno

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Valore dalla sostenibilita' nella logistica...

18 Mar 2009

Kraft Foods Drives Change

Alliston Ackerman

For a company of Kraft Foods Inc.'s size, moving product is no small task. In the United States alone, 500 shipping points support more than 6,000 destinations. Initiatives to centralize the company's transportation planning and execution operations in the United States started in 1997, and Kraft has continually sought ways to optimize and improve the basic benefits of a transportation management system (TMS) ever since.

Supporting Sustainability

Kraft has created a framework that builds sustainability into the beginning or design of any given project. Sustainable logistics has been identified as one of six key areas that when managed efficiently can help to achieve Kraft's sustainability goals throughout its entire system -- from farm to fork.

The company already requires that its carrier partners be SmartWay certified by the United States Environmental Protection Agency. This program identifies products and services that reduce transportation-related emissions. Kraft has also equipped private fleet trucks with a mechanism that reduces consumption during idle times.

Now, equipped with cooperative routing capabilities, "our new transportation management system is a cornerstone of our sustainability efforts. We are able to drive out empty miles [more than 500,000 miles were reduced in 2007] and minimize fuel and emissions," reports Lambotte.

"Overall, this transportation management project has allowed us to create unique capabilities for our business units and customers, allowing Kraft Foods to balance cost and service in a sustainable manner. We believe this will raise the bar of our performance levels for years to come," closes Lambotte.

- **KRAFT ha ridotto i trasporti di 800.000km a vuoto l'anno mediante tecniche di ottimizzazione e collaborazione**

- **332 tonnellate of CO2....**

- **...o 375k€ di risparmio/anno di solo carburante (...considerando 1.30€ per litro)**

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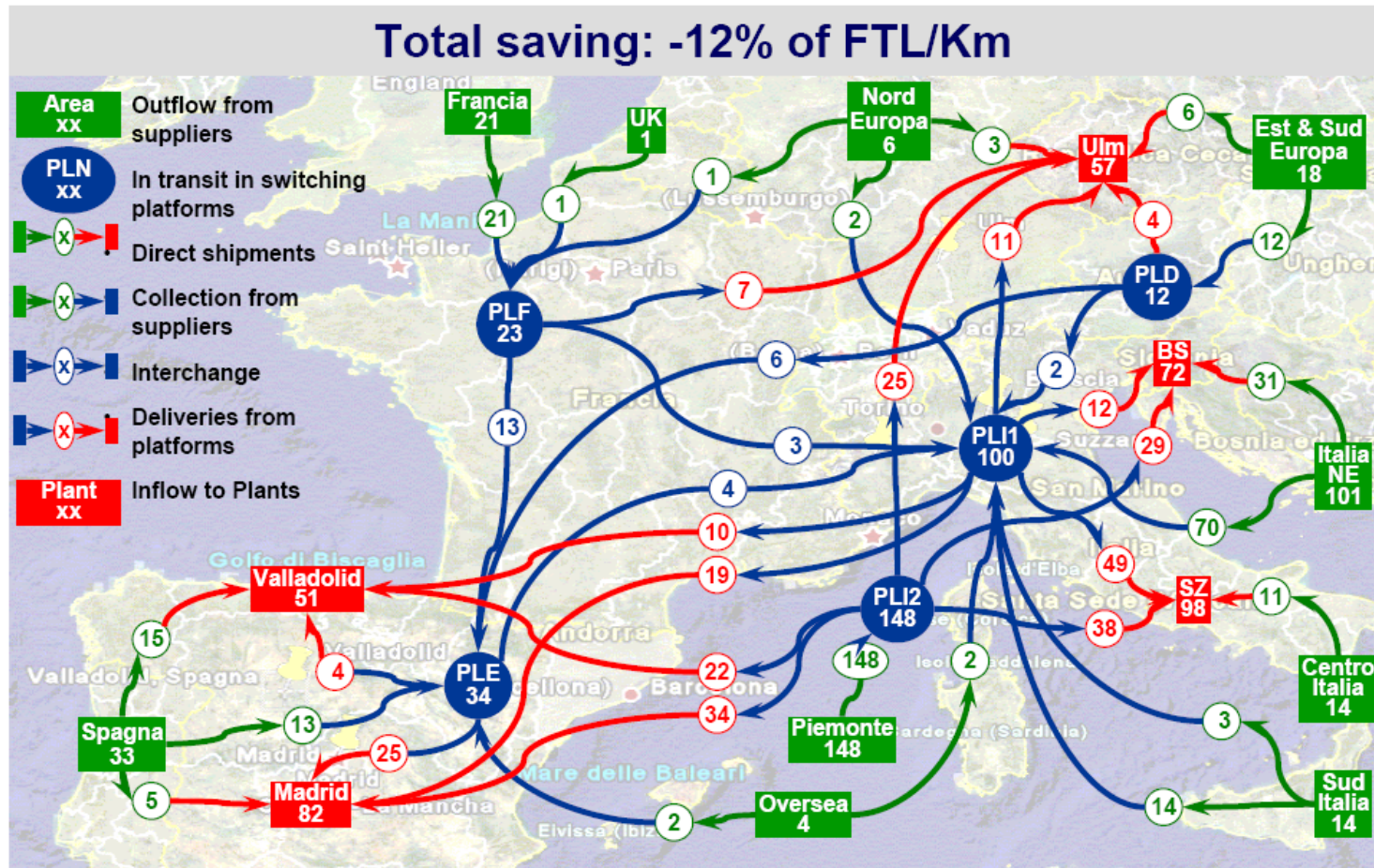
Source: Consumer Goods Technolgy, 18 March 2009

Sostenibilita' nell' Automotive
Ottimizzazione della Rete e dei Trasporti

Influenza del prezzo del carburante sul **disegno** della rete logistica

$75/ barrel

$200/ barrel

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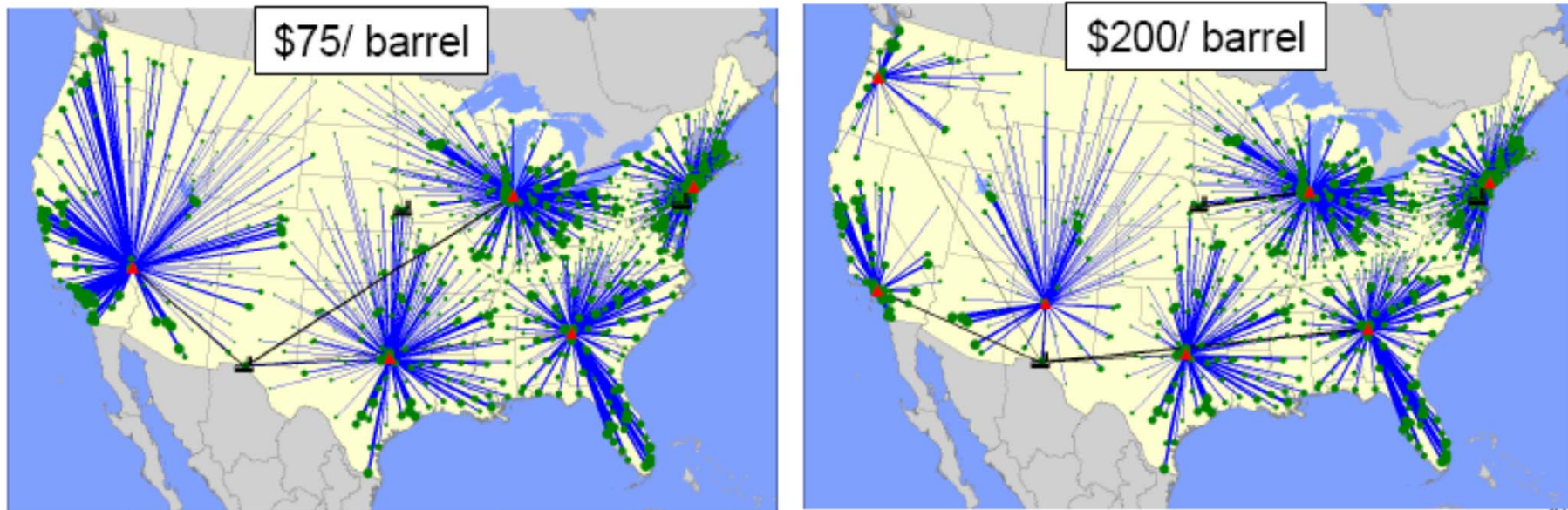
Nuovi criteri di ottimizzazione

…non solo tempi e costi….

- Modelizzazione delle emissioni di CO_2

- Analisi di diversi scenari in funzione degli obiettivi strategici

  – *Qual e' il piano di produzione e distribuzione ideale dato un insieme di vincoli ambientali?*

  – *Come dovrebbe essere disegnata la rete distributiva conseguente?*

  – *Quale fabbrica contribuisce maggiormente alle emissioni?*

- Analisi del rischio

Un modello per la Green Supply Chain

Misurazione quantita' di CO2 emesso in ogni fabbrica

Visualizzazione Carbon Footprint

Emissioni totali di Corporate

Miisurazione quantita' di CO2 per ogni modalita' di trasporto
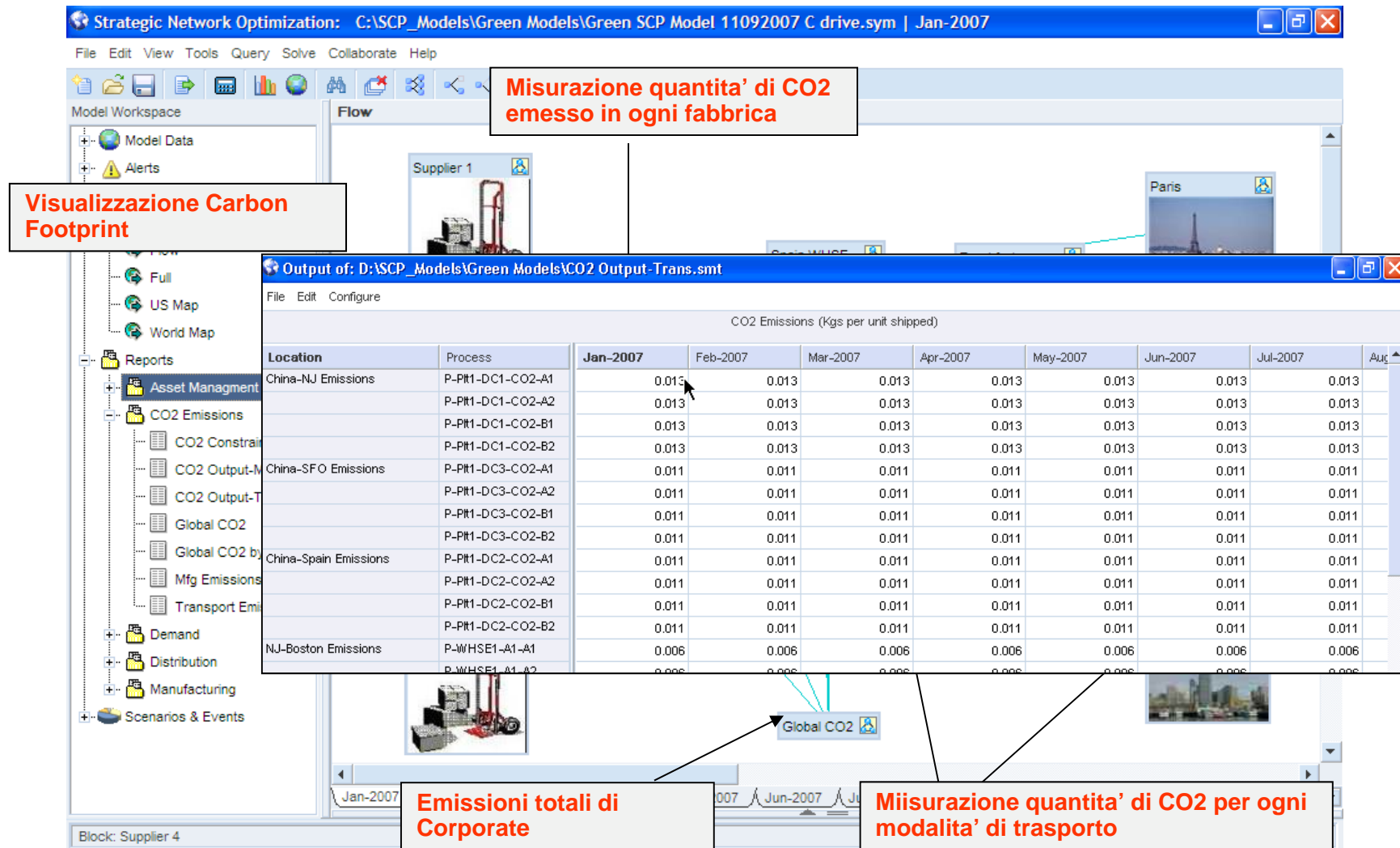
La Trasformazione verso la Sostenibilita'
Nuovi indicatori di performance

Assicura l'efficace utilizzo delle risorse

$$ROA = \frac{Return}{Asset}$$

Riduce i costi e massimizza i profitti

Assicura l'efficace utilizzo delle risorse

$$ROC = \frac{Return}{Carbon}$$

Reduce Carbon Emission

Riduce i costi e massimizza i profitti

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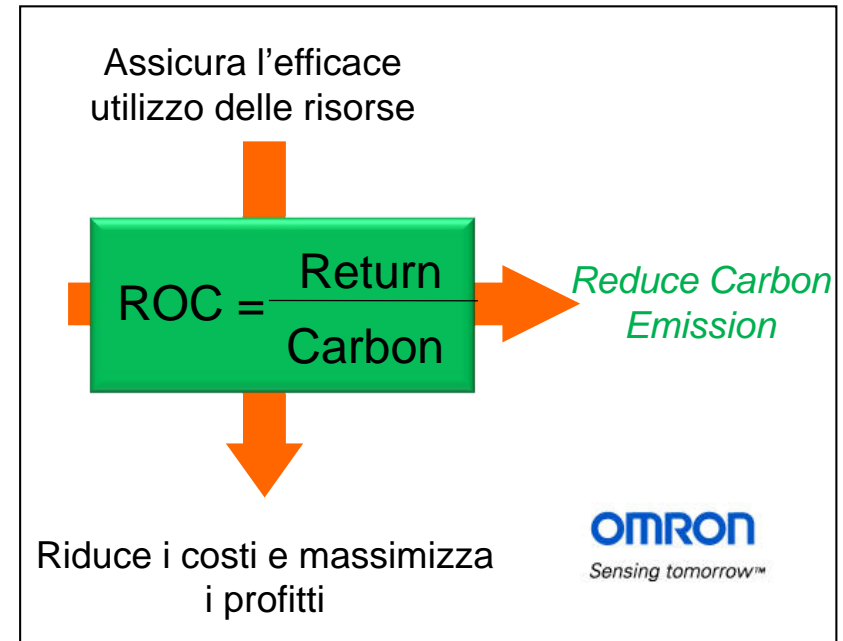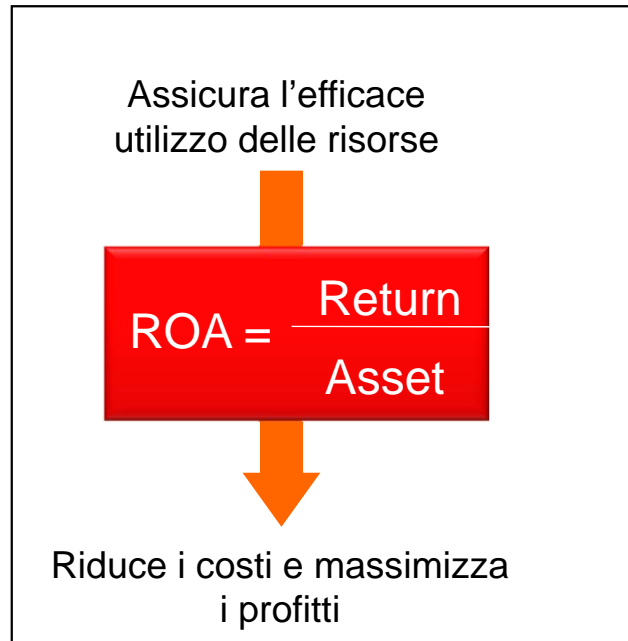
* ROC＝Return on Carbon

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…Verso l' Energy-aware Manufacturing

Energy-aware manufacturing

Dati Di Produzione

Dati su Consumi Energetici

Manual Data

Distribution Board

Eq1 Tags

VM1

Eq2 Tags

VM2

Eq3 Tags

RM2

Raccolta Dati operativi (PLC,Device, MES…)

Raccolta dati consumi energetici da contatori, lettori, Virtual Meterrig

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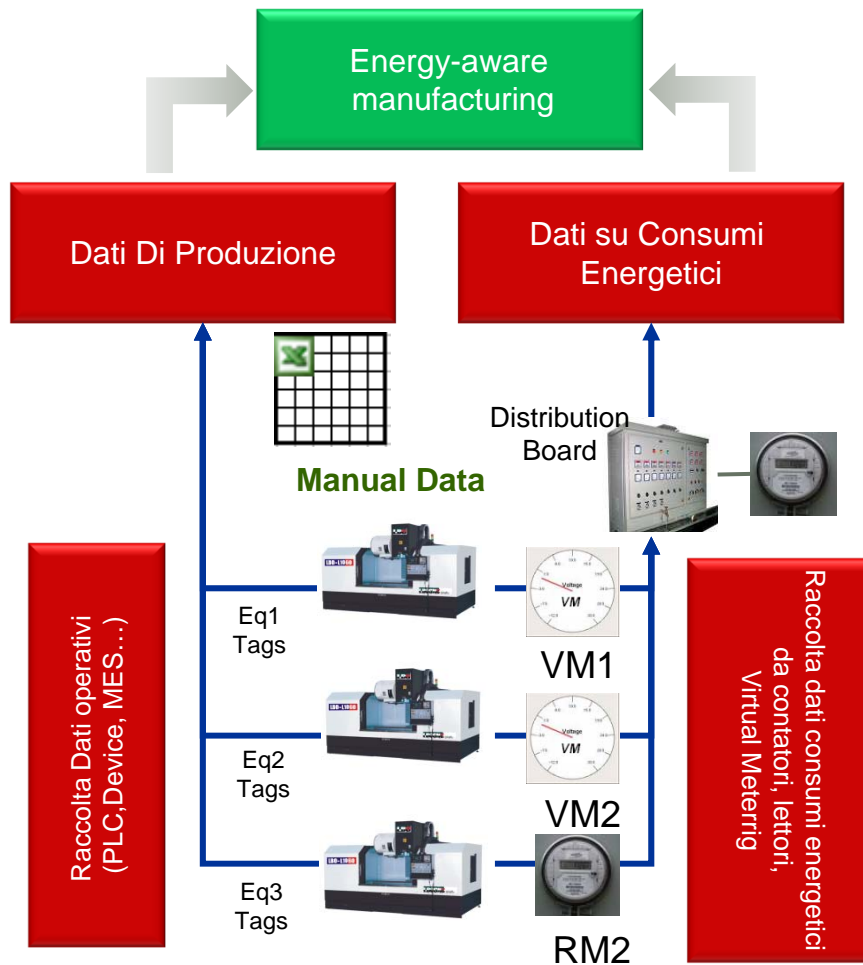
Alcune Domande...

- La Sostenibilita' fa parte dei programmi della vostra azienda?

- Chi e' il Responsabile dei Programmi di Sostenibilita'?

- Dove arrivate nella misura del vostro Carbon Foortprint?

Il Rischio nella Supply Chain

⚠️ **Rischio:**

Dopo aver speso anni in un approccio lean e riduzione di inventario, come minimizzare l'impatto di una "rottura" della Supply Chain?

"Companies that manage their global ecosystems most effectively are as much as 73% more profitable than companies with less capable value chains." — *Deloitte Consulting*

Esempio di Rischio

Trasporto Aereo: 2% per volume, 35% per valore

10.000 tonnellate di beni sono trasportati ogni giorno fra l'Asia e l'Europa

8ml.$ di beni deperibili distrutto
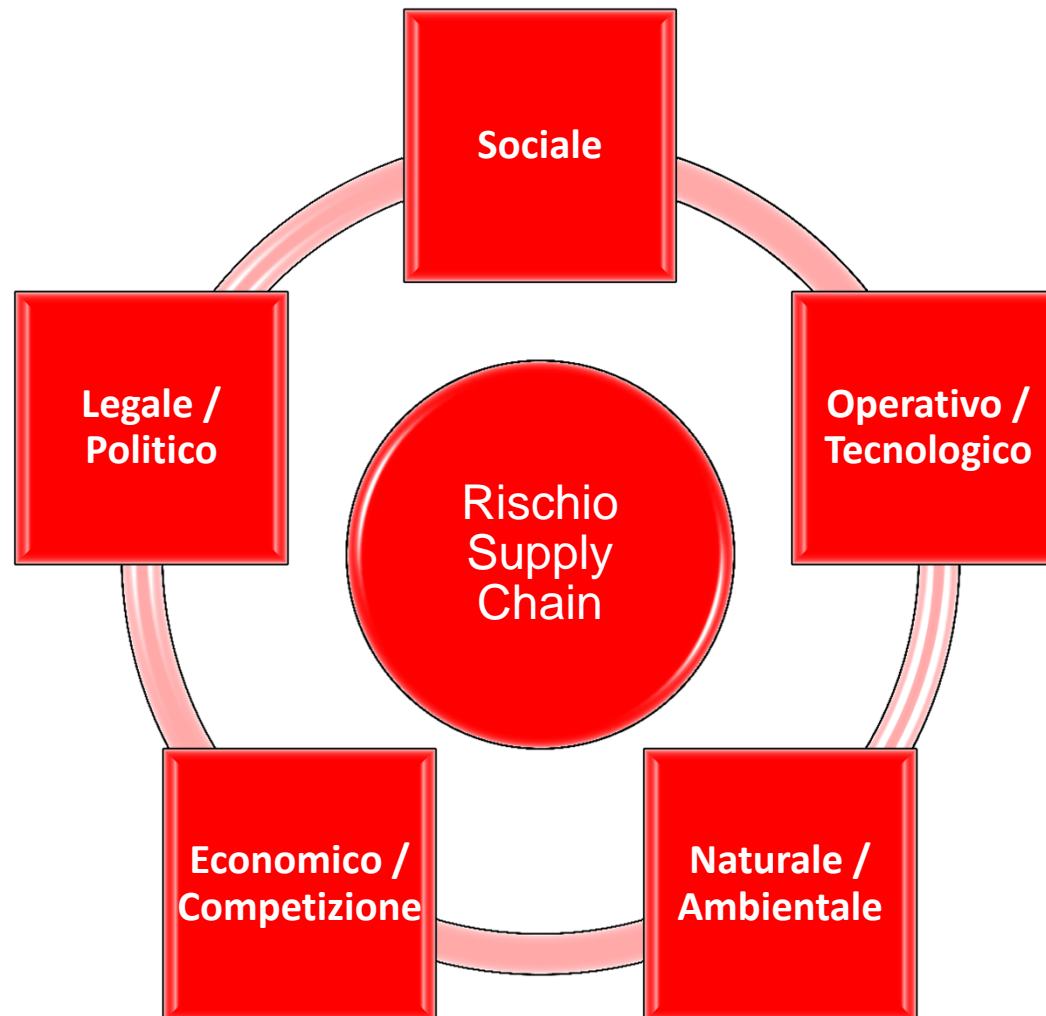
Esempio di rischio

"Ports handling as much as 7% of the country's industrial output damaged, costing $3.4bn in lost seaborne trade per day

Technology supply chain likely to be disrupted for 1-3 months"

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Diverse origini di rischio...

Sociale

Legale / Politico

Operativo / Tecnologico

Rischio Supply Chain

Economico / Competizione

Naturale / Ambientale

Trend Supply Chain e fattori di rischio
Ridistribuzione del rischio sull'intera Supply Chain

Globalizzazione ▶ *Rischio locale diffuso globalmente*

Specializzazione ▶ *Processi efficienti a rischio di evento locale*

Complessita' network ▶ *Riduzione visiblità e maggior latenza*

Processi Lean ▶ *Efficienza vs. minori alternative in caso di rottura*

Disponibilita' informazioni ▶ *Dipendenza da flusso informazioni*

Legislazioni ▶ *Trasporti e flussi logistici ostacolati*

Figure 3: Recent trends in supply chains

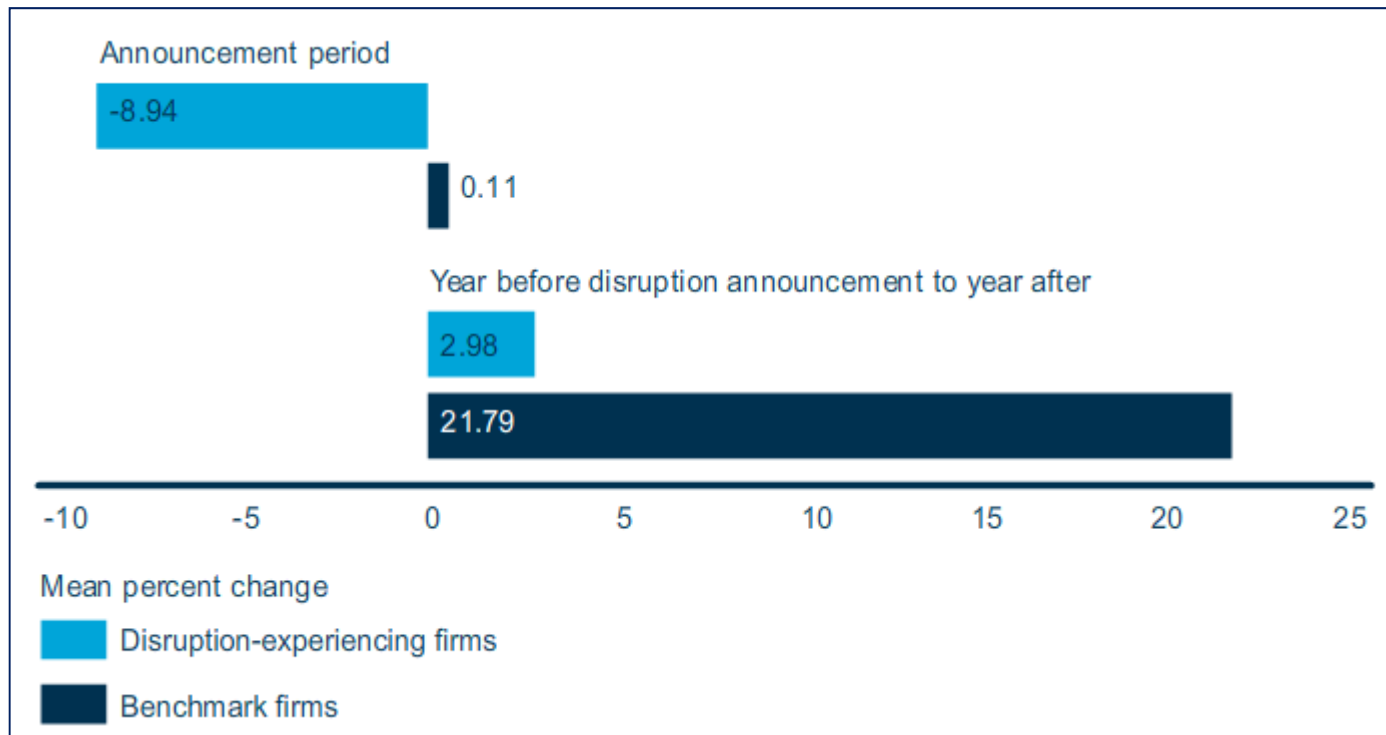| Trend	Example	Risk Impact
Globalization	Outsourcing, offshoring	Local concentrated risks become globally diffused, involving multiple actors
Specialization	Geographical concentration of production	Efficient process can be easily disrupted by localised event
Complexity	Product/network complexity	Reliance on multiple parts/players in diverse locations reduces visibility and adds latency into monitoring systems
Lean processes	Single sourcing, buffer stock reduction	While initially efficiency is improved and costs are lowered, fewer alternatives in case of disruption
Information availability	Track and Trace	Systems increasingly reliant on information flow
Government legislation	Air cargo screening, C-TPAT	Measures can impede efficient flow of supply chain and transport networks

Source: World Economic Forum and Accenture research; expert group findings

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Source: New Model for Addressing Supply Chain and Transport Risk, World Economic Forum 2012

L'impatto di una rottura sul valore di mercato
....l'inevitabile collegamento fra Supply Chain e Finance

Announcement period

-8.94

0.11

Year before disruption announcement to year after

2.98

21.79

Mean percent change

Disruption-experiencing firms

Benchmark firms

Impact on share price and stock price performance of 600 US public companies that announced supply chain disruptions between 1998 and 2007

Source: PwC, 2008: From Vulnerable to Valuable: How Integrity Can Transform a Supply Chain
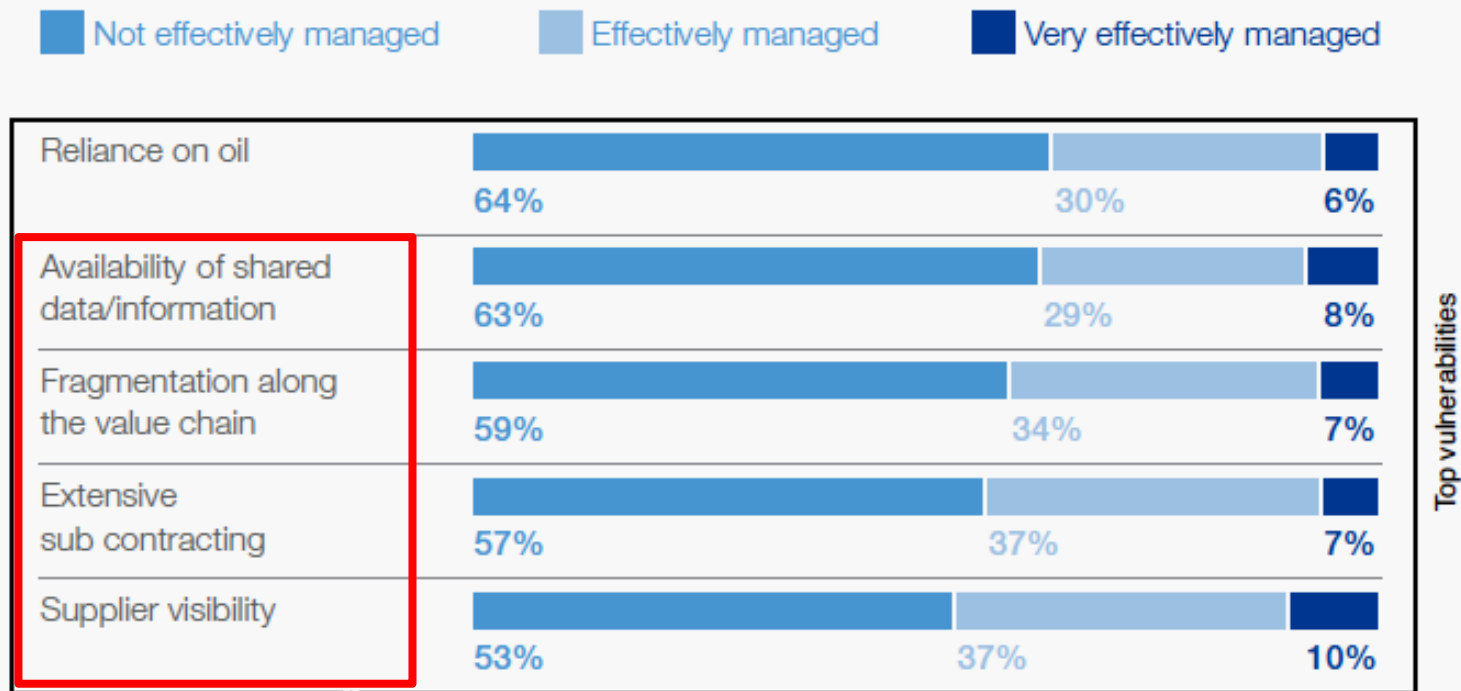
http://www.pwc.com/us/en/supply-chain-management/publications/disruptions-shareholder-value-chart.jhtml

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L'efficacia nella gestione dei rischi
Le maggiori vulnerabilità

Componenti di rischio delle Supply Chain gestiti meno efficaciemente

■ Not effectively managed   ■ Effectively managed   ■ Very effectively managed

	Not effectively managed	Effectively managed	Very effectively managed
Reliance on oil	64%	30%	6%
Availability of shared data/information	63%	29%	8%
Fragmentation along the value chain	59%	34%	7%
Extensive sub contracting	57%	37%	7%
Supplier visibility	53%	37%	10%

Top vulnerabilities

"Quattro delle cinque maggiori aree di vulnerabilita' sono relative a visibilità e controllo di lunghe e complesse supply chain. Tre delle cinque maggiori vulnerabilità riguardano la gestione di multipli attori nell'ecosistema"

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Progetti per mitigare il rischio
Visibilita', Network Design, Collaborazione

	2013			2012
1	Supply chain visibility improvement	+2 ▲	1	Operational excellence
2	Reducing environmental footprint	New ★	2	Contract renewal with Logistics Service Provider (LSP)
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10	Improve long term forecasting/ planning	-5 ▼	10	Supply chain collaboration

Source: Capgemini Consulting Report – The 2013 Supply Chain Agenda

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Alcune Domande...

- Quali sono i rischi principali che potrebbero impattare la Vostra Supply Chain nei prossimi anni?

- Quali passi sta intraprendendo la Vostra azienda per mitigare i rischi per la Supply Chain?

- Chi e' il responsabile per la gestione del rischio? E' una responsabilita' interna o esterna?

- In che misura la visibilita' vi aiuta a mitigare il rischio sulla Supply Chain?

Conclusioni

Conclusioni
Benefici di Business….

Le aziende con piattaforme best in class…

- Spendono meno nella Supply Chain

- Forniscono un piu' alto livello di servizio

- Hanno migliori informazioni per prendere decisioni

- Collaborano e integrano la supply chain con i processi interni e i partner commerciali

- Modellano l'impatto del rischio, della sostenibilita' e della profittabilita' sulle loro Supply Chain

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Conclusioni
….e abilitatori ai benefici

Oracle Value Chain Solutions
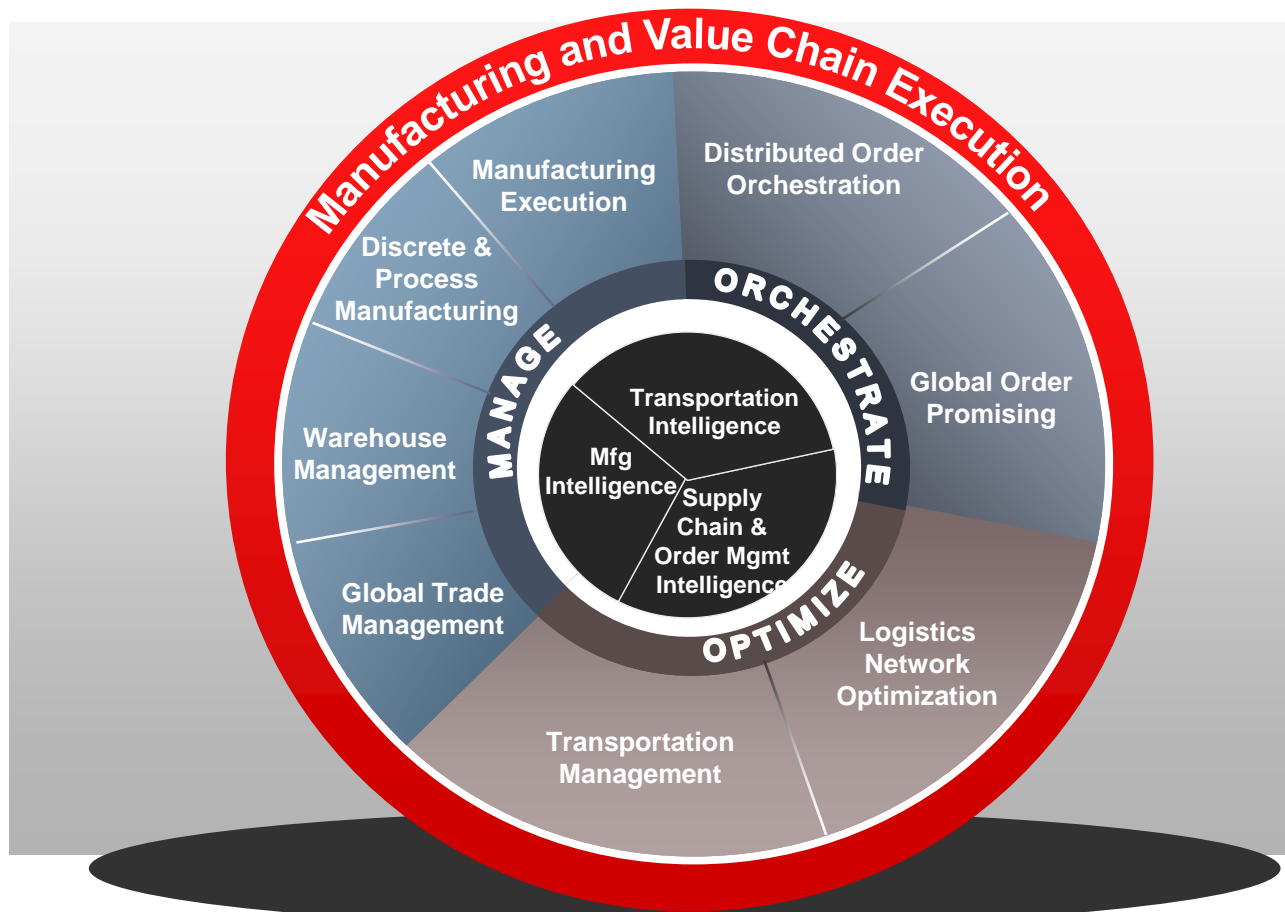
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