

Green Logistics Strategy and related ICT requirements

Working Group discussion at the Logistics for LIFE plenary, Bremen, 2/11/2010

Strategic management issues identified:

- **External Transparency.** Companies need to communicate their environmental performances (carbon footprint, energy efficiency) to external stakeholders.
 - o External stakeholders include Customers, Investors, Regulatory bodies, Non-governmental Organizations, Media and opinion makers in general.
 - o The main issue in terms of information management is the need for standards for environmental performances calculation and publication. There are initiatives on course (e.g., from ISO, “green” SCOR) but not yet a well defined framework for industrial users.
- **Internal Transparency.** Companies need measurement methodologies and tools to assess their environmental performances for internal uses.
 - o Environmental performances measurement must be fully integrated with existing indicators systems on cost, quality and feasibility of logistics services, plus they must allow comparison between alternative modes of transport.

Transparency is a prerequisite to implement different approaches:

- **“True greenness”:** a dedicated offer of low-carbon services for environmentally concerned customers, taking into account emissions alongside price and speed of transport. The value proposition consists in offering a portfolio of transport solutions including slower but environmentally safer options (e.g., multi-modal routes increasing rail utilization).
 - o This may have a positive effect on revenues, by attracting new customers and helping to retain customers with green supply chain requirements.
 - o Approaches and tools are needed for **multi-actor, green transport planning**, supporting supply-chain wide evaluation and planning of door-to-door transport solutions, including different modes, carriers and logistics operators.
 - o To be complete, such tools should encompass transport, logistics operations *and* production, since logistics operators are often in charge of production and assembly phases on behalf their customers.
- **Continuous improvement of operations:** being able to measure their environmental performances, logistics companies can incrementally improve their processes and operations to reduce the overall carbon footprint. This will affect the overall business, in the end ensuring cleaner logistics services to the customer.
 - o This approach does not require a company or business unit to specialize in “green services”. Internally, improvements must be motivated by cost reductions and by the need environmental targets set by external stakeholders (e.g., customer requiring certification of the provider’s carbon footprint).
 - o No specific approaches and ICT tools are needed, besides the existing practices for strategic planning and evaluation of investments.
- **Green supply chain co-design:** the logistics services provider and the customer become partners to study and design new supply-chain configurations, aimed at energy efficiency and emissions reduction. Design choices include production and warehouse locations, routes and transport modes, optimized to meet environmental targets.
 - o This approach has the greatest potential for improving environmental performances, but requires an innovative mindset and willingness to collaborate on both the customer and provider sides.
 - o Advanced modeling and simulation tools might be of help, but these are only a marginal support to hard-gained professional expertise.