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Baltic University Programme

Student's Conference on Environmental Management Systems

Auditing and Certification Systems

Case Study: Implementation of a Combined ISO 9001 / ISO 14001 Process Management System

Ostrava, Czech Republic, 27 November 2010

Dr. Jörg Bentlage, MBA

Agenda

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- **Introduction and Refresher on Management Systems**

Case Study

- Company Overview
- Implementation of a Process Management System
- Challenges & Lessons Learned

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Introduction

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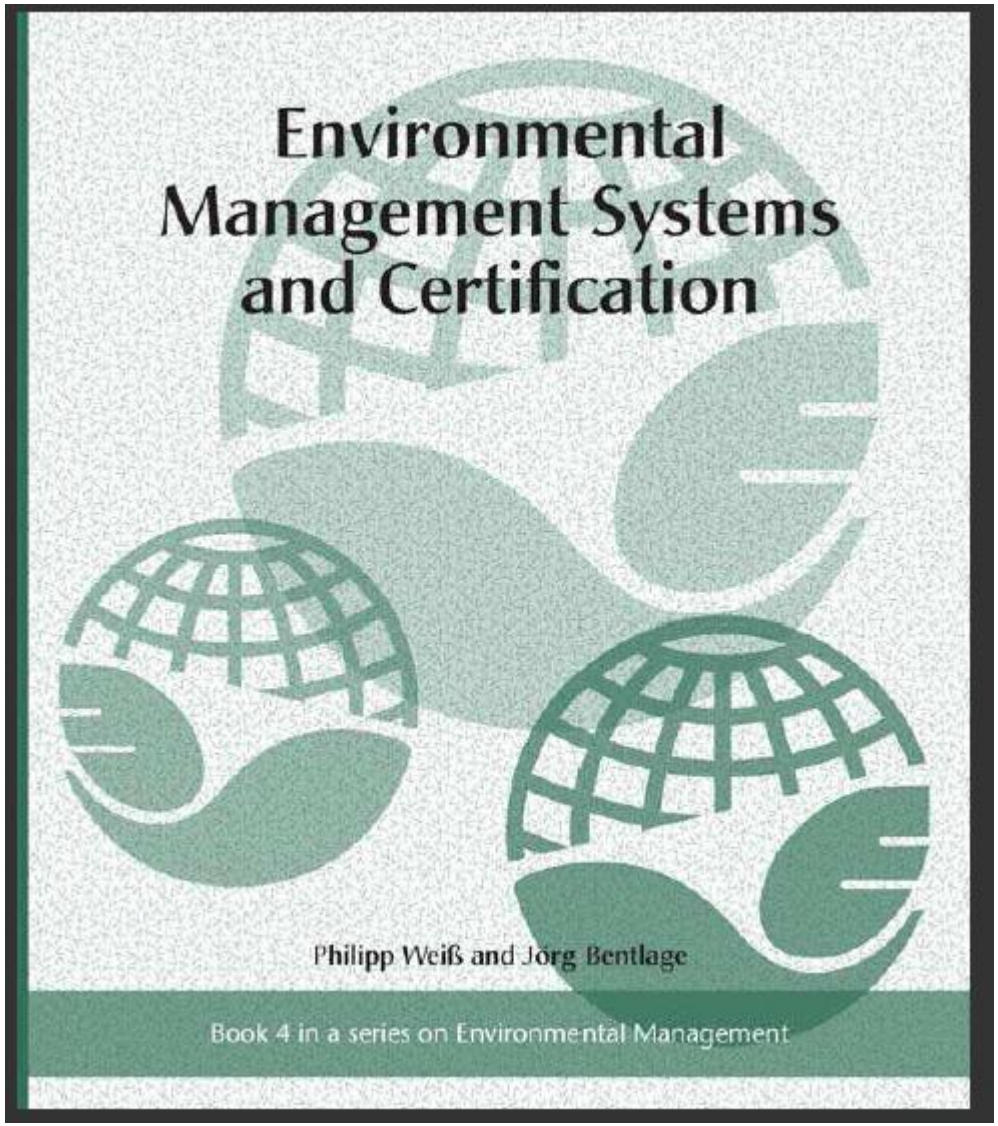

- Hopefully a comprehensive introduction and overview on Environmental Management Systems (EMS) and the "art of auditing"
- Although already from 2006 still featuring a broad introduction and many useful tools for implementing an EMS and ussing audits to identify gaps in the environmental performance of an organization and help fuel the continuous improvement process
- One out of the 7 best publications globally on the subject topic that money can buy …

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International Standards – Basics (also check www.iso.org)

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ISO 14001 (www.iso.org/iso/iso14001_video)

- Global standard for all kind of organizations
- Focus on reducing and ideally avoiding environmental impacts
- Compliance with all applicable environ-mental regulations
- Processes of an organization and their interactions have to be documented
- Environmental program based on concise environmental data
- Measurable objectives required to control appropriateness and efficiency of environmental program
- Continuous improvement process required
- Audits and management reviews on a regular basis

ISO 9001

- Global standard for all kind of organizations
- Focus on customer satisfaction
- Physical work environment and other requirements have to be taken into account
- Processes and their interactions of an organization have to be documented
- Quality program based on concise quality data
- Measurable objectives needed to control appropriateness and efficiency of quality program
- Continuous improvement process required
- Audits and management reviews on a regular basis

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Basics

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- Manufacturer of printing inks located in Southern Germany
- Company origins in Eastern Germany, founded in late 19th century
- Current production built after WW II on a greenfield site in greater Munich area
- Site today surrounded by other light manufacturing companies but also residential areas
- Site is a mix of old buildings and outside storage areas plus new developments
- Around 200 employees (of which approx. 2/3 work in the production itself, remainder in R&D, sales and admin)
- Produces printing inks for sheet offset printing, general and specialized packaging materials, high-grade advertising and display materials and a variety of other purposes

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Highly Innovative in the Environmental Arena: Highlights of Environmental Achievements

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- Mid 1990's: developed and successfully introduced mineral oil free offset inks to the markets; vast majority of their products using renewable raw materials
- End of 1990's: EMAS implementation and consecutive implementing of an environmental program focusing on waste avoidance and reduction as well as a comprehensive analysis of all activities aiming at reducing energy consumption
- 2004: ISO 14001 and ISO 9001 implementation (EMAS was withdrawn earlier in favor of ISO 14001)
- Procuring increasing amounts of emission free energy sources since many years
- 2008: detailed emissions balance and carbon footprint analysis, offering carbon neutral inks to their customers globally
- Since May 2010: 100% of their electricity consumption procured from certified renewable energy sources (generated from water power)

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Calculation Flowchart Carbon Neutral Printing Ink

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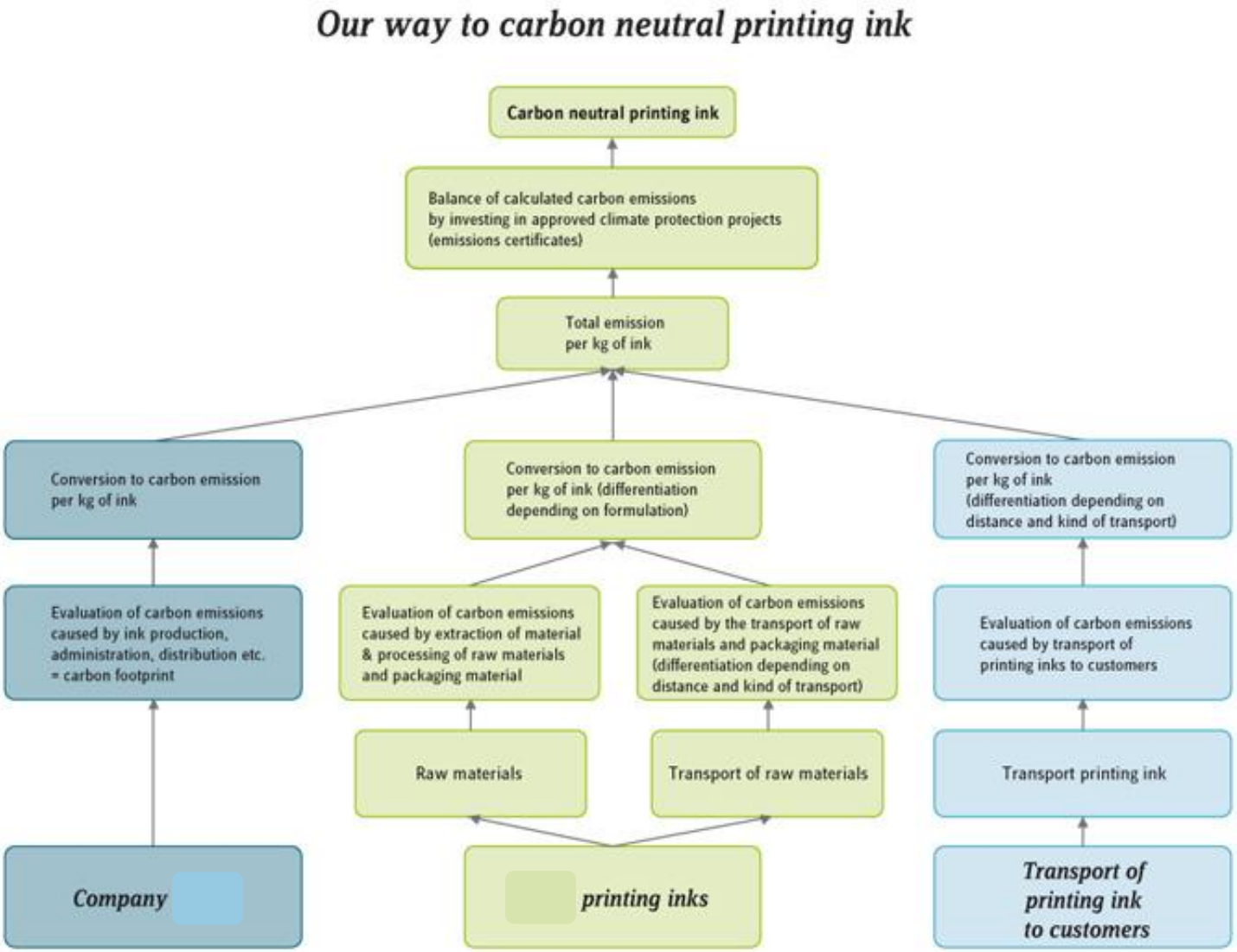

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Main Reasons to Implement a Process Management System and Certification Against ISO 14001/9001

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Internal Reasons

- Certain gaps in responsibilities with respect to environmental affairs and related duties
- Unclear and slow environmental workflow; no processes documented
- No structured approach on environmental objectives and related activities
- Environmental performance could not be measured
- Waste of resources: too much waste, no performance indicators or benchmarks on consumption vs. output (resource efficiency: use of raw materials and waste generation in relation to output)
- Presumed increase of competitiveness

External Drivers

- Main client (good for approx. 12% of revenues) requested it in procurement negotiations
- Major Japanese electronics manufacturer requested an environmental supplier audit to be undertaken
- Major competitor already certified against ISO 14001
- Increasing regulatory pressure
- Pressure on prices/competitiveness

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Milestones in Implementing the Process Management System

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- 2003: decision by board of directors to implement a process management systems and later certify against ISO 9001 and 14001
- Implementation process took about one year
- Implementing a process landscape and documenting around 40 single processes
- Comprehensive staff training
- Implementation of a combined quality and environmental program with 15 specified quality and environmental objectives entailing approx. 60+ single action items to be accomplished (regular updates and adjustments in the following years)
- Several internal audits and a management review prior to certification

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Audit Situation II

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Audit Situation V

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Lessons Learned

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Human Interface

- Management support partly missing
- Organizational gaps
- Logistics
- Safety and environmental awareness of staff
- Technical staff training
- Language issues

Technical Side

- Infrastructure/Logistics
- Limited storage space
- Amount of hazardous goods
- Amount of finished goods on site

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Selected Environmental Achievements

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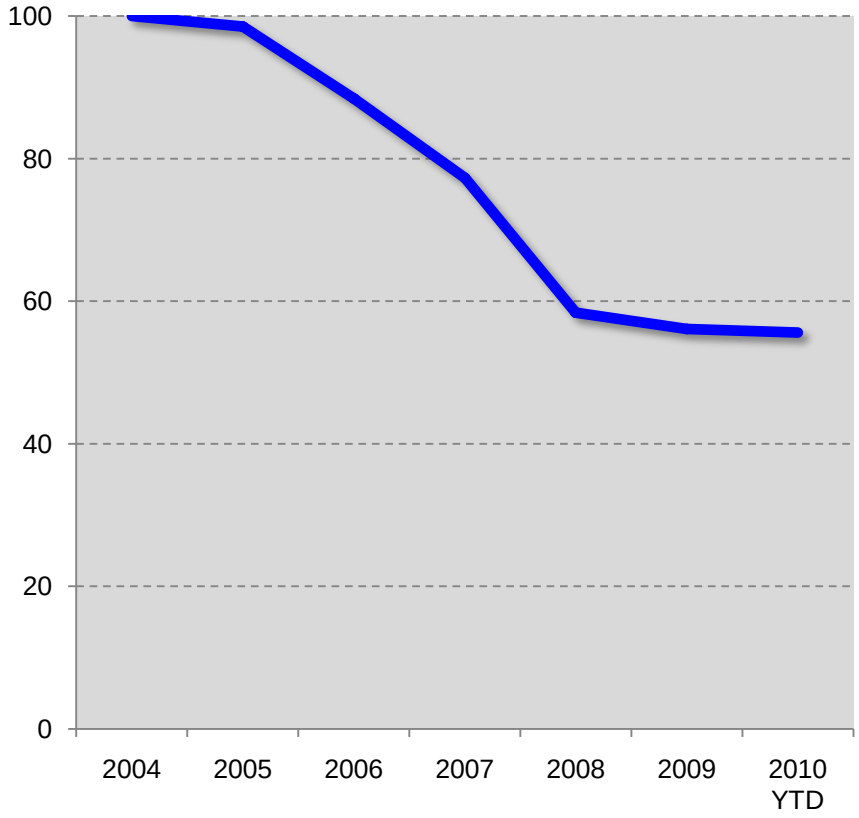
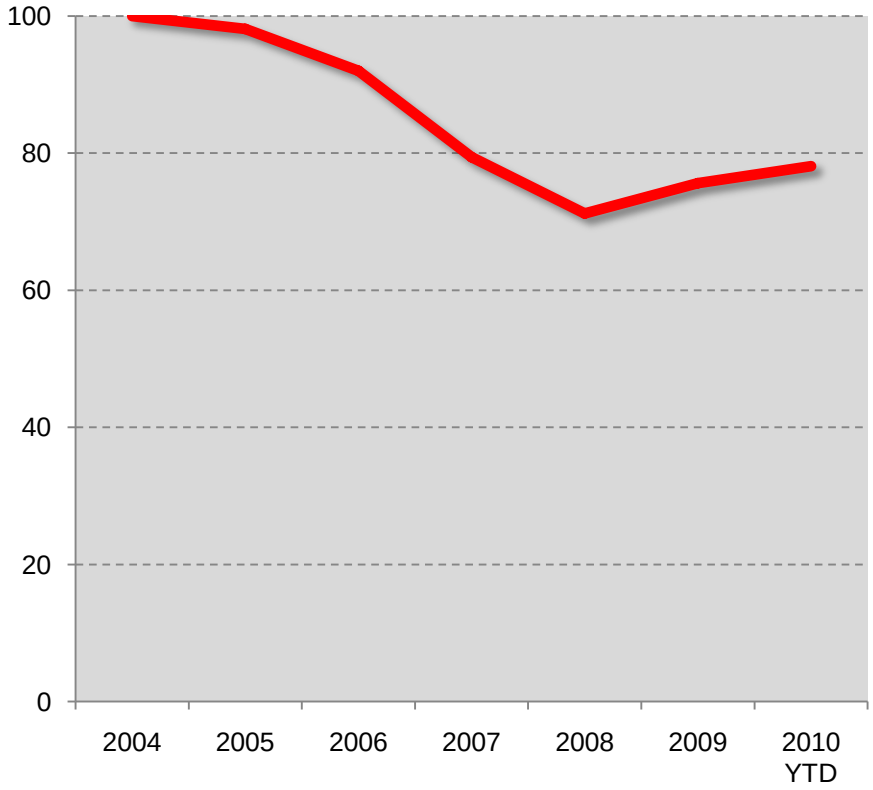
Production Waste (2004 = 100)



Energy Consumption (2004= 100)



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Q & A

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