Life Cycle Management Capability Maturity Model: helping SMEs apply LCA in business decision making

International Life Cycle Partnership
To bring science-based life cycle approaches into practice worldwide
Overview

- Introduction
- Capability maturity model
- UNEP’s activities
Life cycle challenges and opportunities

80% of current management effort covers only 20% of the available opportunities for value creation

Opportunities for value creation through environmental and social responsibility

Upstream Opportunities: Building up better alliances with suppliers, access to limited resources, stability of supply, etc.

Downstream Opportunities: Customer satisfaction and loyalty, improved brand image, etc.

Source: Adapted from WWF-UK 2003
SMEs in a globalized world - a glance to emerging economies -

1. Corporate responsibility and sustainability issues are **VASTLY** different around the world. **Culture counts, more than anything:** Local knowledge essential

2. Global principles with local implementation, combined with „redline“ areas of ethics (i.e. bribes) and overall targets, is the way large companies are operating successfully and sustainably

3. Stakeholders are less predictable and issues can escalate very quickly

4. Agendas are different: But **skills, education and jobs are always Number One**

5. ‘The greener agenda’ is understood and often consumers are less skeptical

**SUSTAINABILITY IS LOCAL!**
Sustainability
Life Cycle Approaches

- Ecolabel, Ecodesign, Sustainable Procurement

- Material Flow Accounting, Input – Output Analysis
- (Env) LCA, Social LCA, Life Cycle Costing, LCSA
- Data
Capability Framework Promotes Balanced Improvement Efforts

- Complements performance measures
  - Fewer but targeted
  - Quality control
- Aligns near term targets with longer term development need
- More fundamental concept that applies across industries, products & regions
<table>
<thead>
<tr>
<th>Maturity Level</th>
<th>Description</th>
<th>Span of control</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Ad hoc</td>
<td>Chaotic, success depends on heroic effort of individual.</td>
<td>Individual</td>
</tr>
<tr>
<td>2 Managed</td>
<td>Requirements managed, measured and repeatable results on a project basis.</td>
<td>Project</td>
</tr>
<tr>
<td>3 Defined</td>
<td>Standard processes, consistent across organization, measures of process and work products.</td>
<td>Organization</td>
</tr>
<tr>
<td>4 Quantified</td>
<td>Process improvement objectives continually revised to reflect changing business objectives: agile and innovative workforce.</td>
<td>Value chain</td>
</tr>
<tr>
<td>5 Optimizing</td>
<td></td>
<td>Society</td>
</tr>
</tbody>
</table>

**Metrics**
- No metrics
- Binary: Yes – no
- Process: Inputs/outputs, Eco-efficiency
- Cradle to grave, Integrated across Value chain
- Sustainability, resilience
ACTION LEARNING

- Adapted to current level of organizational capability
- Continual Improvement
- Multiple P-D-L-A Cycles
- Gradual expansion system boundaries for added capability and enhanced business value

<table>
<thead>
<tr>
<th>Scope</th>
<th>Business case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-technical system</td>
<td>Enhanced well being- sustainable prosperity</td>
</tr>
<tr>
<td>Value chain</td>
<td>Stronger balance sheet- long- term competitive advantage</td>
</tr>
<tr>
<td>Enterprise</td>
<td>Top line growth - Innovative products, new markets</td>
</tr>
<tr>
<td>Facility</td>
<td>Bottom line gains- efficiency, cost reduction</td>
</tr>
<tr>
<td>Unit operation</td>
<td>Risk avoidance- Legal compliance</td>
</tr>
</tbody>
</table>
Improvement projects designed to achieve near-term objectives and incrementally build components of LCM management system
UNEPS/SETAC: Next Steps

- Conduct Phase 2 pilot to validate with quantified benefits
- Refine self-assessment protocol & assess integration with MNC supply mgmt
- Refine training materials and deploy to internal (MNC) and external (local network) trainers

Confirm ability of SME suppliers to plan their own improvement programs & balance local/global sustainability objectives
Benefits of Capability Approach

- **Global companies**
  - Extend supply chain programs to a much broader base than practical with internal staff
  - Focus company programs on strategic partners, material issues
  - Leverage previous investments in lean manufacturing

- **SME suppliers**
  - Faster learning, more successful projects
  - Framework to rationalize competing requirements of customers & develop a more cohesive improvement strategy
  - Facilitates integration of life cycle issues into existing procedures, routines
  - Local sustainability

- **Communities**
  - Emphasis on localized decision-making ensures action aligned with significant environmental issues and development priorities
  - Job creation (better jobs) for organizations to support suppliers locally

*Capable suppliers, vibrant communities, and resilient value chains!*
Objective 1:
Expanding capability worldwide to apply life cycle approaches

Objective 2:
Refine and facilitate methodologies for life cycle assessment achieved by international consensus

Objective 3:
Facilitate the use of life cycle based approaches in business, government and the society about natural resources, materials and products targeted at consumption clusters (food, housing and mobility)
• UNEP/SETAC Life Cycle Initiative
  2002 - on
• International Life Cycle Partnership for a Sustainable World
• Our sponsors -
The UNEP/SETAC Life Cycle Initiative

- Business, Academic, and Governments working together to:
  - To bring science-based life cycle approaches into practice worldwide
  - Over 2000 individuals collaborating globally
  - SETAC brings the science
  - UNEP brings access to governments and dissemination
  - One stop shop for life cycle approaches
Life Cycle Approaches Worldwide – Next activities: Capability Development

Legend:

- Level 0: No information available.
- Level 1: No LC experience or regulation.
- Level 2: Limited experience and no regulation.
- Level 3: Some research experience and foundations of LC based regulation.
- Level 4: Some good practices and limited regulation.
- Level 5: Advanced LC practices and developed regulation.

Basis: 2008
Thanks,

Questions?

Sonia Valdivia,

ilci@unep.fr

http://lcinitiative.unep.fr