

How to Know If and When It's Time to Commission a Life Cycle Assessment



CAMX Education Session:

LCA Introduction: Tuesday, Oct 14th

Oct 13-16, 2014 Conference - Orlando, FL

Co-presenters:

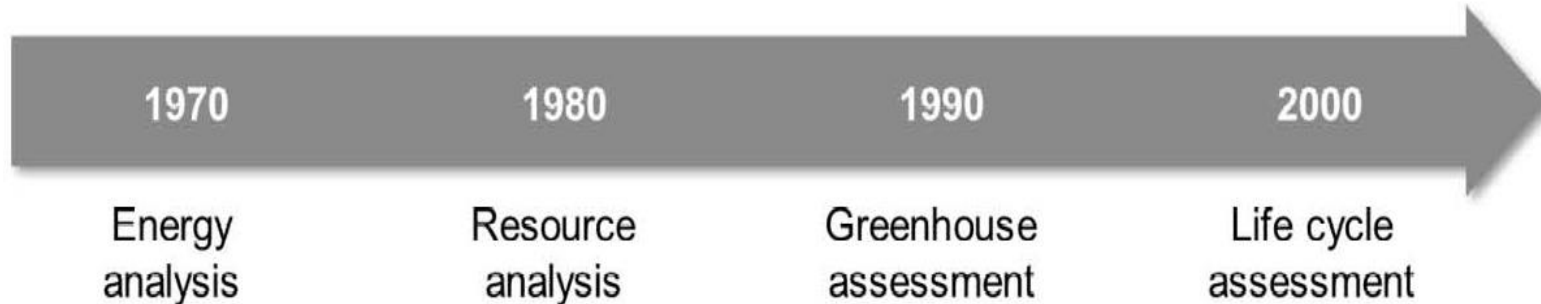
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History of LCA



- Developed in the late 1960s/early 1970s
- Evolved from “eco-profiles” to current 4 basic, interdependent stages of an LCA:
 - Goal and Scope
 - Inventory Analysis
 - Impact Assessment
 - Interpretation





Commonly Used LCA Metrics

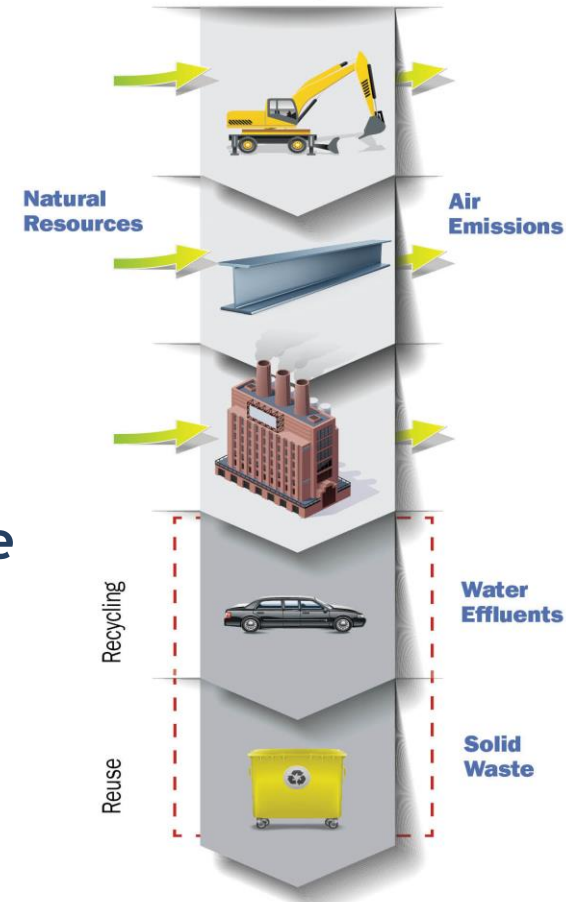
International/U.S. sources identified and defined key metrics, addressing:

- Energy Demand
- Global Warming
- Ozone Depletion
- Water Footprint
- Eco and Human Toxicity Assessment
- Land Use

What Can LCA Do?

- Highlight value chain efficiency opportunities
- Promote understanding of product manufacture and delivery systems
- Identify areas in value chain that need improvement
- Ensure that changes do not “shift the burden”
- Highlights trade offs
- Compare two systems that deliver same service
- Benchmark progress
- Provide foot printing data
- Support environmental claims

Figure 4: Environmental Claims and LCA
Claims Must Reflect the Stated Study Scope



What Doesn't LCA Do?

- Does NOT measure product performance
- Does NOT address compliance with environmental laws
- Does NOT include “bricks and mortar” of capital equipment
- Does NOT include analysis on support personnel needs
- Does NOT normally measure building space conditioning
- Does NOT include minor inputs
- Does NOT provide information about employee direct impacts
- Is NOT a risk assessment analysis
- Does NOT define specific course of action to take

How to Decide if LCA is the Right Tool

Examine:

- Product environmental/energy attributes
- Trade-offs
- Consideration of life cycle stages, unit processes and flows

Figure 5: LCA Systems Approach

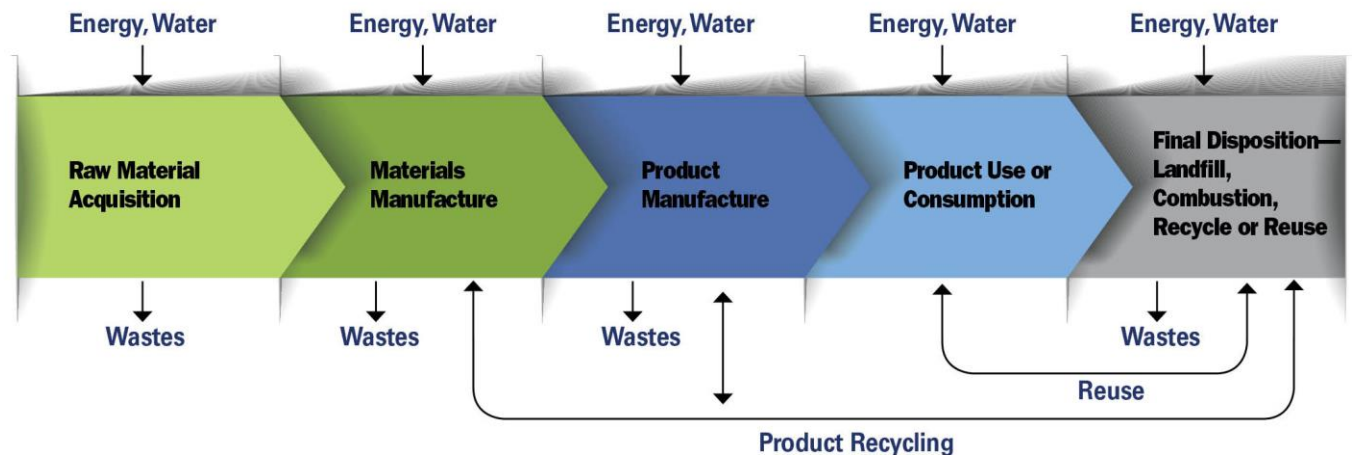
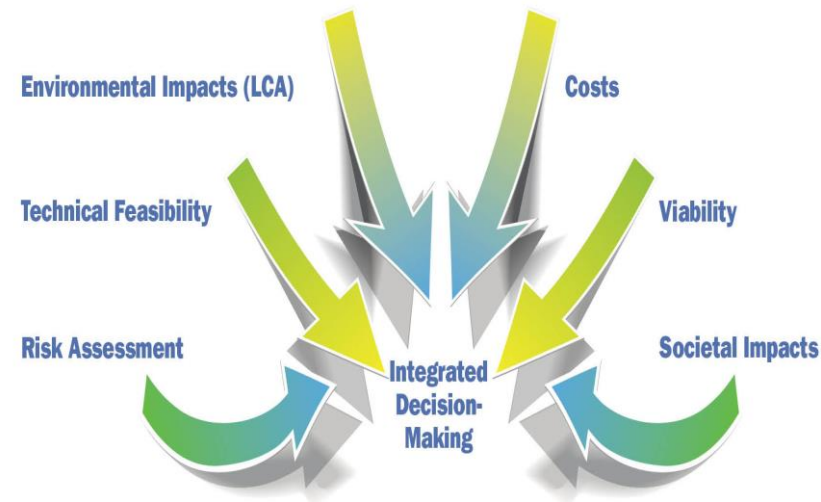


Figure 6: Integrated Decision-Making



Integrated Decision Making

- Review of decision making process and tools - including and separate from an LCA
- Summary of the strengths and limitations of an LCA

Figure 7: Product Improvement—A Repetitive Process



LCA Approaches: What Works Best

Basic Questions:

- What are you trying to accomplish?
- What questions are you answering?
- Who will use the results?

Types of LCAs:

- Scoping, Screening and Simplified LCAs
- Comprehensive Complete LCAs
- Product Comparisons
- Attributional and Consequential LCAs

Figure 8: Life Cycle Assessment: The Holistic Yardstick of Environmental Performance



Data Availability, Quality and Sources

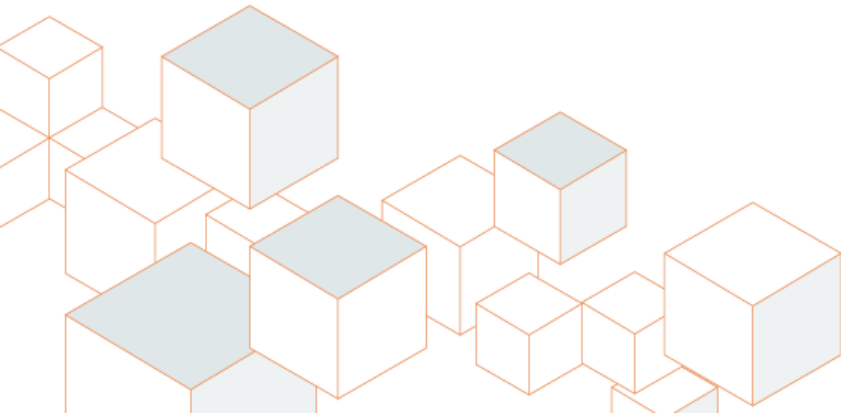
- Basic data quality requirements to consider before conducting an LCA
- Different types of data:
 - Primary company data
 - Public or purchased data



Professional Expertise

Benefits of LCA tools:

- Using LCA software
- Engaging a qualified LCA professional



Using and Communicating LCA Results



Key considerations when conducting an LCA:

- Be as accurate as possible
- Understand the boundaries of your study
- Don't take shortcuts - comprehensive data collection is important
- Don't “cherry pick” study results - full transparency is key
- Importance of critical review / peer review

Conclusion

- ICCA hopes this guide enables decision makers to pick and choose the right LCA tools
- Keep researching - new tools and developments are always on the horizon



ACLCA - New Certification Effort



- ACLCA supports certification of LCA professionals with LCACP exam (conforms with ISO 17024):
<http://www.lcacenter.org/certification.aspx>
- Special committee formed to develop similar certification for LCA executives who manage sustainable programs
- ICCA Executive Guide may be included as a resource under ACLCA certification exam/topics

Questions?



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