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**COMPUTER-INTEGRATED  
KNOWLEDGE SYSTEM (CIKS)  
NETWORK: REPORT OF THE 2<sup>ND</sup>  
WORKSHOP**

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**NIST**

United States Department of Commerce  
Technology Administration  
National Institute of Standards and Technology

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## **Life-Cycle Computer-Aided Data Project**

**Ken Humphreys**  
**Pacific Northwest Laboratories**

Construction industry customers demand products that are functional, energy efficient, and environmentally responsible. With increased regulation and international environmental standards, the application and performance of products are changing and wider global markets are developing. The life-cycle assessment approach (LCA) relates to U.S. industry competitiveness and is a topic of the International Standards Organization (ISO). This directly affects business decision making and product design.

This project is designed to address two difficulties associated with integrating LCA into business practice; lack of standardized LCA tools and lack of standardized data sets. The lack of tools and data makes widespread, consistent, and cost-effective use of LCA virtually impossible. The project's overall objective is to develop tools and data that will facilitate the use of LCA within industry and government as part of routine business decision making. Specific goals are:

- To develop and deploy to industry and government a computer modeling system that supports management, control, and manipulation of life-cycle data.
- To collect and disseminate energy and environmental data for industrial commodities (such as primary metals, bulk chemicals, forest products, plastics, glass, and cement) to support the conduct of LCAs.

Industry is participating in the project through in-kind financial participation through data collection, analysis, and review and through a formal advisory group that provides guidance to the data development effort and helps define the software system requirements from an industrial user's perspective.

The concept for the software modeling was completed in 1995 and major data efforts are underway. A production version of the LCA inventory module was due to be released in 1996.