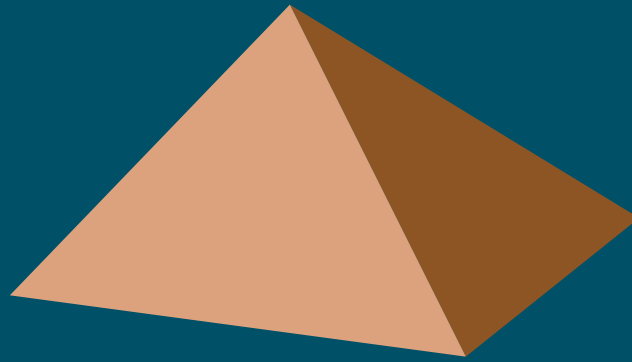


IMPLEMENTATION MODEL

KNOWLEDGE STRUCTURE



GUIDE

CII Member Companies

3M	ABB Lummus Global
Abbott Laboratories	ALSTOM Power
Air Products and Chemicals	BE&K
Anheuser-Busch Companies	BMW Constructors
Aramco Services Company	Baker Concrete Construction
BP Amoco Corporation	Bechtel Group
Bayer Corporation	Black & Veatch
The Boeing Company	Burns & McDonnell
CITGO Petroleum Corporation	Burns and Roe Enterprises
Cargill	Butler Manufacturing Company
Celanese	CCC Group
ChevronTexaco	CDI Engineering Group
Conoco	Chicago Bridge & Iron Company
Dofasco	Day & Zimmermann International
The Dow Chemical Company	Dick Corporation
DuPont	Dillingham Construction Holdings
Eastman Chemical Company	Eichleay Engineers & Constructors
ExxonMobil Corporation	Emerson Process Management
FPL Energy	Fluor Daniel, Inc.
General Motors Corporation	Foster Wheeler USA Corporation
General Services Administration	Fru-Con Construction
GlaxoSmithKline	Graycor
Huntsman Corporation	Hilti Corporation
Intel Corporation	Honeywell
Eli Lilly and Company	Integrated Electrical Services
NASA	Jacobs
Naval Facilities Engineering Command	Johnson Controls
Ontario Power Generation	Kellogg Brown & Root
Phillips Petroleum Company	Kiewit Construction Group
Praxair	Kværner
The Procter & Gamble Company	M. A. Mortenson Company
Reliant Energy	Murphy Company
Rohm and Haas Company	PSEG Energy Technologies
Shell Oil Company	Parsons Energy & Chemicals Group
Smithsonian Institution	Petrofac LLC
Solutia	Primavera Systems
Tennessee Valley Authority	Rust Contractors
U.S. Air Force Research Laboratory	S&B Engineers and Constructors Ltd.
U.S. Army Corps of Engineers	SMS Demag
U.S. Department of Commerce/NIST	The Shaw Group
U.S. Department of Energy	Siemens Westinghouse Power
U.S. Department of State	Structural Group
U.S. Steel	Technip USA Corporation
Weyerhaeuser Company	Walbridge Aldinger Company
	Washington Group International
	Williams Group International
	H. B. Zachry Company



A Guide to the CII Implementation Model and Knowledge Structure

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*Prepared by the
Construction Industry Institute
Implementation Strategy Committee*

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Executive Summary

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Since its initiation in 1983, CII has performed valuable research and produced many project management processes and tools that have great potential to improve the construction industry. However, implementation of CII products has still been somewhat disappointing. In order to facilitate effective implementation of CII products, the CII Implementation Strategy Committee (ISC) was formed in 1995 and has focused its efforts to increase the level of implementation of best practices within CII member companies.

In order to help member companies implement CII products effectively, the CII ISC has developed the CII Implementation Model which summarizes the needed steps to effective implementation of best practices. It also sponsored the CII Knowledge Team that recently developed the CII Knowledge Structure, logically organizing all CII products and research findings. This document will summarize each of these efforts and provide guidance to organizations wishing to implement CII products.

The CII Implementation Model contains a foundation and nine building blocks to help develop an organization's implementation effort. The foundation and building blocks are discussed, including key issues that need to be pursued by organizations wishing to improve implementation of CII products.

One of the biggest complaints concerning implementation of CII products has been the sheer volume of reports and tools and the difficulty with finding the "right practice" to implement. A logical structure was developed in order to organize CII's efforts since 1983 and facilitate identification of best practices. This development, called the CII Knowledge Structure, including CII Best Practices and definitions of terms related to the Knowledge Structure, is explained in this document. The CII Knowledge Structure consists of 13 Knowledge Areas that are broken into 47 Focus Areas, which are further divided into 11 Best Practices, 12 Proposed Best Practices, and 24 Information Areas. Each Focus Area is supported by various CII products such as tools, products, and/or references. The Knowledge Structure gives an organization a key mechanism for supporting its implementation efforts.

Chapter 1

Introduction

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As a consortium of owners, contractors, and academia, CII has performed much valuable research since its initiation in 1983. In spite of the tremendous potential of many of its findings, implementation of CII products has been somewhat disappointing. Barriers exist, and CII has worked to identify barriers that inhibit innovation and change and contribute to slow industry progress (CII, 1995). Identified barriers to implementation include:

- low familiarity with best practices
- lack of commitment to best practices
- limited emphasis on training and education of best practices
- failure to integrate new ideas and recommendations into organization's procedures
- limited benchmarking of costs and benefits
- lack of innovation within the industry due to risk aversion.

CII has also addressed implementation as being one of six distinctive core competencies in its strategic plan: (CII, 2001)

CII is implementation driven. CII acts as a focal point for collecting from the worldwide construction industry state-of-the-art concepts and practices for improving the quality and the cost effectiveness of the capital investment process. CII is the key in transferring this information for the benefit of the members. CII continuously seeks to support adoption and implementation of best practices by the members.

In order to facilitate effective implementation of CII products and overcome implementation barriers, the CII Implementation Strategy Committee (ISC) was formed as a standing committee in 1995 to address this core value. One of its first tasks was to develop an "Implementation Model" to assist organizations wishing to implement CII products.

1. Introduction

.....

The CII Implementation Model contains a foundation and nine recommendations for an organization to pursue in implementing best practices. This Implementation Model will be discussed in detail later in this document.

In spite of ongoing efforts to improve implementation of CII products, many CII member companies are still struggling to apply CII products on real world projects. It is especially hard for a new member organization to identify “best practices” of CII and how to implement them. In addition, many people have defined CII best practices in different ways even among CII member companies. Until recently, there was no “official” list of CII best practices and the need for a process to identify CII best practices was identified as a key development by the CII ISC.

To resolve this problem and increase the level of implementation of CII products, the CII ISC suggested the need for developing a well-organized structure of CII knowledge. As a result, the CII Knowledge Structure was developed in order to enhance implementation. All products developed by CII are included in this Knowledge Structure, which is discussed after the presentation of the Implementation Model.

Chapter 2

CII Implementation Model

CII encourages comprehensive, effective use of proven CII products by member companies. Implementation of CII Best Practices is driven by the member companies and supported by CII. Upon joining CII, each member organization makes a strong commitment to improve its business performance through the adaptive use of CII products.

Use the CII Implementation Model to craft your organization's implementation effort.

To help member companies implement CII products, including best practices, effectively, the CII ISC has developed an Implementation Model that specifies the steps of implementing a CII product as illustrated in Figure 1.

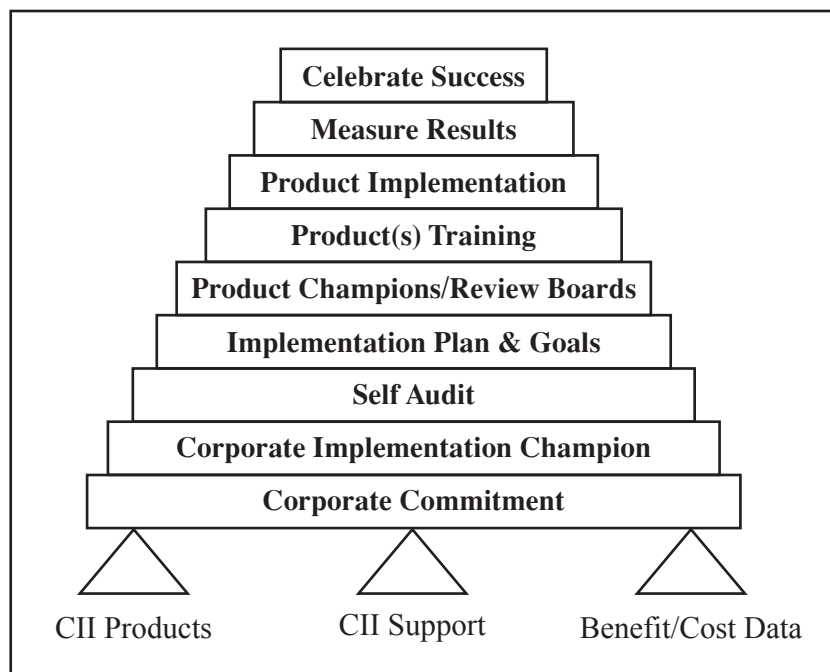


Figure 1. CII Implementation Model