

Planning the Reengineering of Legacy Systems

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Overview

Five Steps:

- Project justification
- Portfolio analysis
- Cost estimation
- Cost-benefit analysis
- Contracting

What is reengineering

One-to-one transformation of business functions and data into different structures, possibly with a different language or environment

No Functional adaptations or enhancements

Content of databases and system interfaces must not change during the reengineering project or you will not be able to prove the correctness of the transformation

Definitions

Business-process reengineering

Data reengineering

Restructuring existing databases

Software reengineering

Renovation of programs and other software artifacts

Recycling

Extracting reusable components from a system

Objectives of reengineering

- Improve maintainability
- Migration
- Achieve greater reliability
- Preparation for functional enhancement
- Combination

Project justification

“Noone is keen on reengineering”

Prove that reengineering will reduce maintenance costs and improve quality

- ascertain current quality
- calculate current maintenance cost
- assess current business value

4 steps in reengineering justification

- introduce a measurement program
- analyze software quality
- analyze maintenance costs
- assess business value

Portfolio analysis

Plot technical quality vs business value (fig 3)

Applications with low technical quality and high business value are candidates for reengineering

Cost estimation

Cost-benefit analysis

Contracting