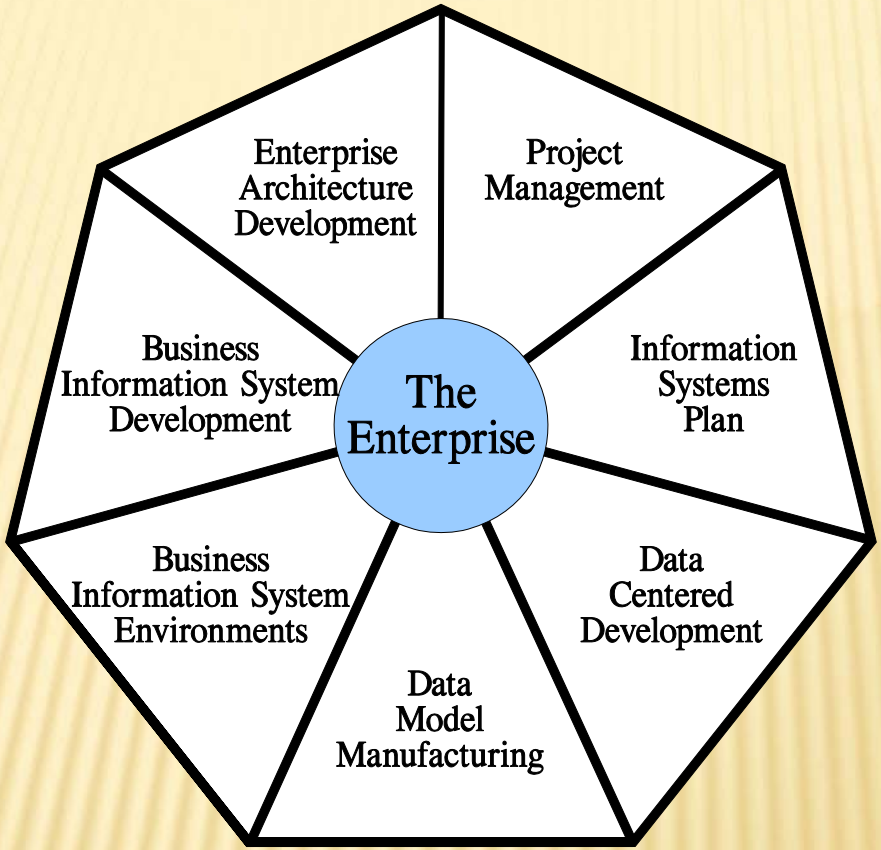
WHITEMARSH DATA MANAGEMENT SERIES



Positive-ROIs Solutions that address Critical Business Information Systems Problems

Whitemarsh Information Systems Corporation

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BLUF (BOTTOM LINE UP FRONT)

- Virtually all Business Information Systems are:
  - Late
  - Over budget
  - Not meeting original requirements to say nothing of current requirements.
- This briefing introduces positive ROI solutions to these vexing problems.

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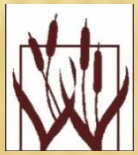
TOPICS

- The 7 ROIs, that unless met result in projects that are late, over budget and unfulfilled requirements.
- Payoff scenario that shows that these problems can and have been solved.
- A Road Ahead that is practical, efficient, and effective.
- References that you can check to prove what's presented.



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THE 7 POSITIVE ROI SOLUTIONS FOR IT'S CRITICAL PROBLEMS

- Enterprise-Wide Project Management (16:1 ROI)
- Information Systems Planning (5.9: 1 ROI)
- Data-Centered Development and Management (28:1 ROI)
- Data Model Manufacturing (8.6:1 ROI)
- Business Information Systems Environments (7.7:1 ROI)
- Business Information System Manufacturing (2.8:1 ROI)
- Enterprise Architecture Development (14.6:1 ROI)

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#1 ROI(16:1) ENTERPRISE-WIDE PROJECT MANAGEMENT

- Link: http://www.wiscorp.com/roi_enterprisewideprojectmanagement.html
- The Issues:
  - Task-driven vs deliverables driven projects
  - Same projects but different deliverables and tasks
  - Same projects but different velocities
  - Same projects but different work environments
  - "Stove-piped" projects
  - One-off custom developed project plans
  - Not "integrate-able" project deliverables

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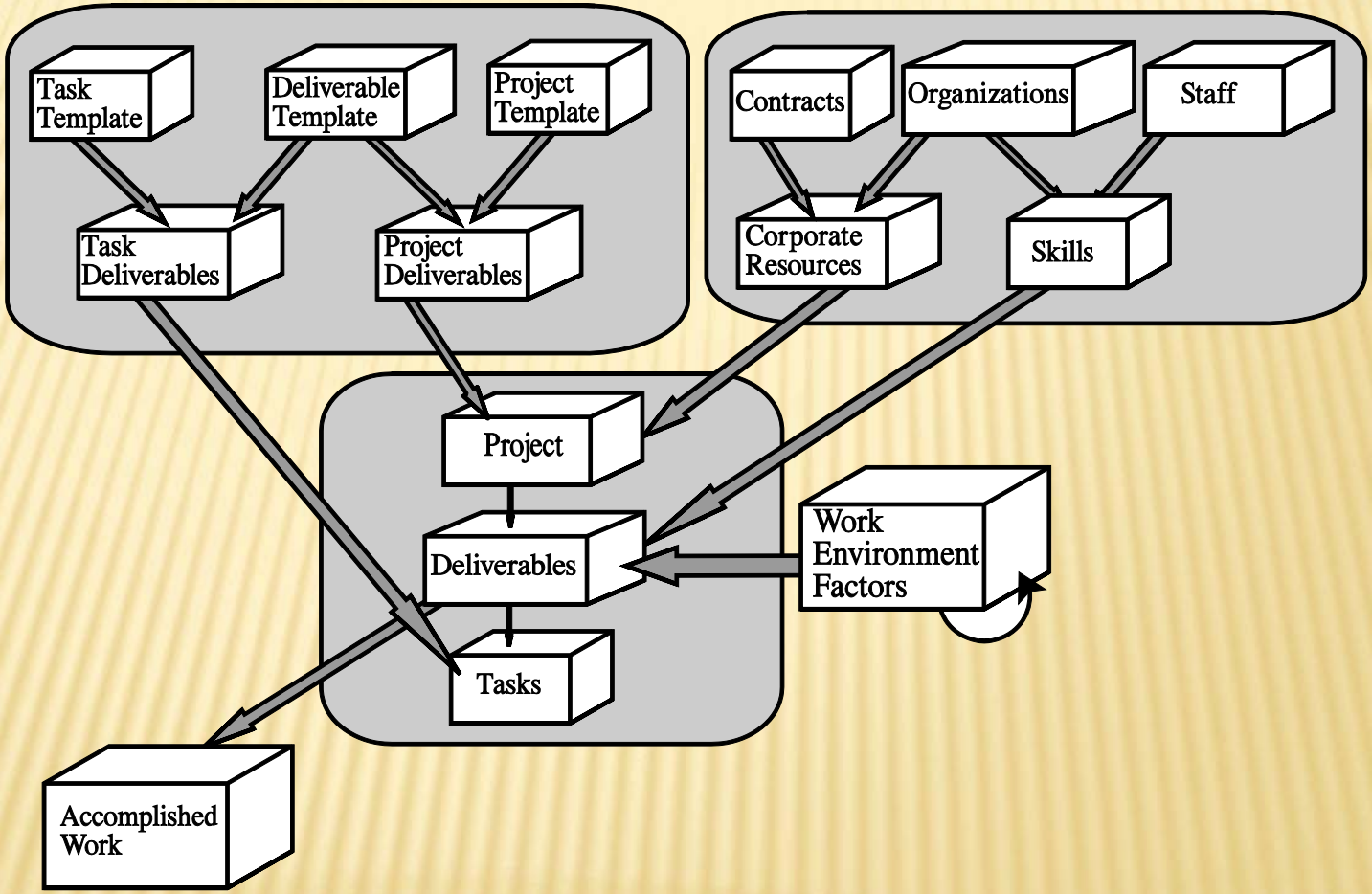
SOLUTION ENGINEERING: PROJECT MANAGEMENT



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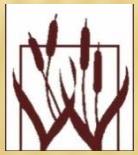
#2 ROI (5.9:1) INFORMATION SYSTEMS PLANNING

- Link: http://www.wiscorp.com/roi_informationsystemsplanning.html
- The Issues:
  - Projects driven by squeakiest wheel syndrome
  - Projects done in an illogical order
  - Projects done with conflicting completion dates
  - Projects that don't result in interoperable and enterprise-integrated work products
  - Projects based on stove-piped legislative mandates
  - Projects not based on business resources and their life cycles



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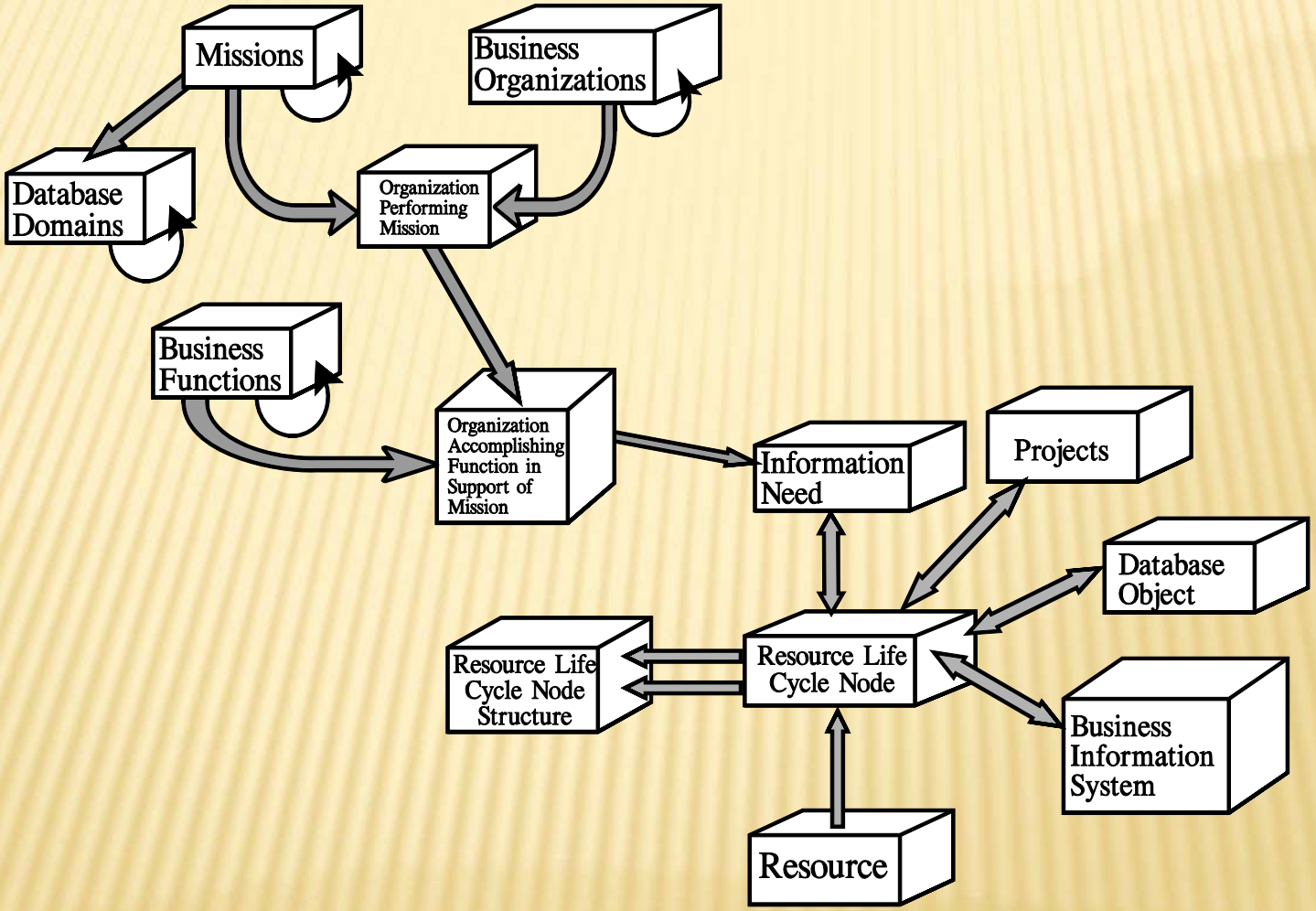
SOLUTION ENGINEERING: INFORMATION SYSTEMS PLANNING



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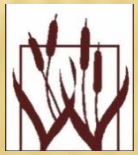
#3 ROI (28.1) DATA-CENTERED DEVELOPMENT AND MANAGEMENT

- Link: http://www.wiscorp.com/roi_datacentereddevelopmentandmanagement.html
- The Issues:
  - Process-driven business information systems cause 4.6 times more components to implement
  - Process-driven approach results in expensive rework
  - ETL: the "integration-fixer" for process-driven approach can cost more than original business information systems
  - Process driven systems are difficult, expensive, and are error prone to integrate because of data mismatches.



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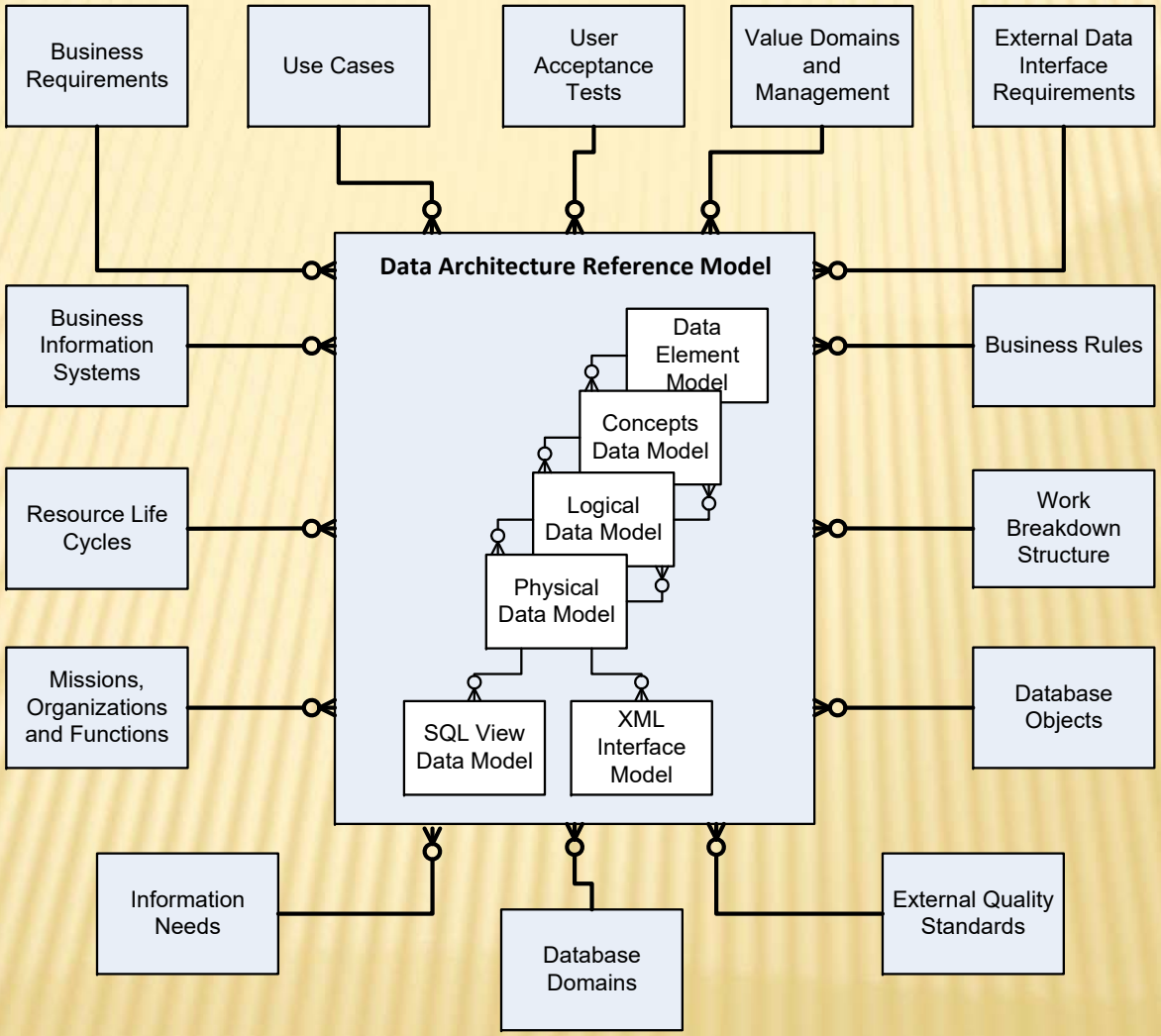
SOLUTION ENGINEERING: DATA-CENTERED DEVELOPMENT



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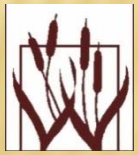
#4 ROI (8.6:1) DATA MODEL MANUFACTURING

- Link: http://www.wiscorp.com/roi_datamodelmanufacturing.html
- The Issues:
  - One-off data models make dis-integration permanent.
  - Some same-named tables & columns with different meanings.
  - Some different-named tables & columns with same meanings.
  - Traditional approach (conceptual, logical, physical) causes multiple-disparate models with overlapping areas that should be congruent.
  - Data model development “slows/blocks” business information system development.
  - Little to no data model reuse across the enterprise.



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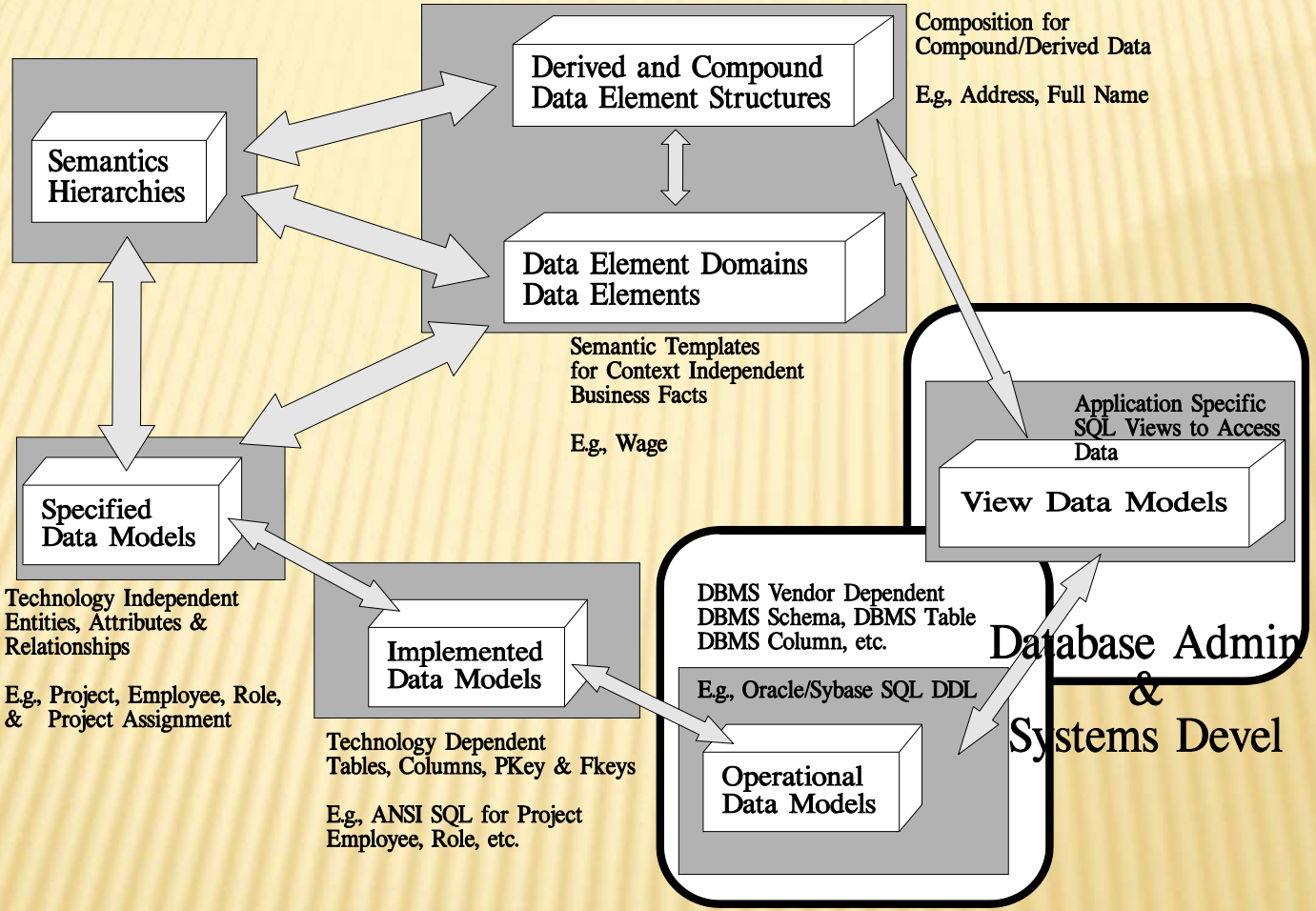
SOLUTION ENGINEERING: DATA MODEL MANUFACTURING



Essential and Complete Domain for Data Standardization

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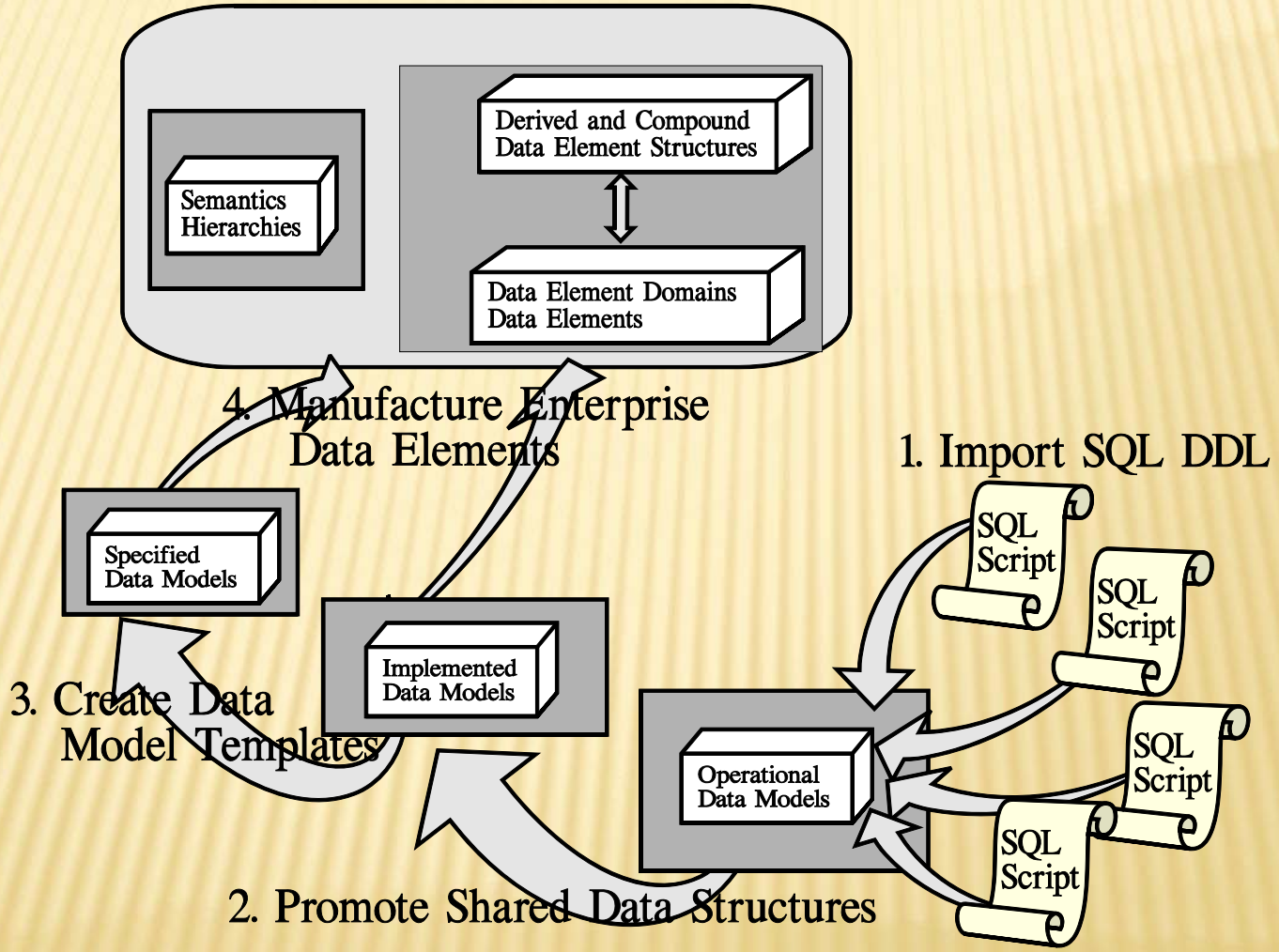
REVERSE ENGINEERING: DATA MODEL MANUFACTURING



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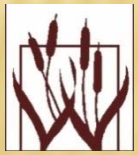
#5 ROI (7.7:1) BUSINESS INFORMATION SYSTEM ENVIRONMENTS

- Link: http://www.wiscorp.com/roi_businessinformationsystemenvironments.html
- The Issues:
  - Stove-piped Business Information Systems
  - Little data model reuse across business information systems.
  - Complex, expensive & conflicting ETL environments for business information system development
  - Redundant and conflicting same-functional-area developments across the enterprise



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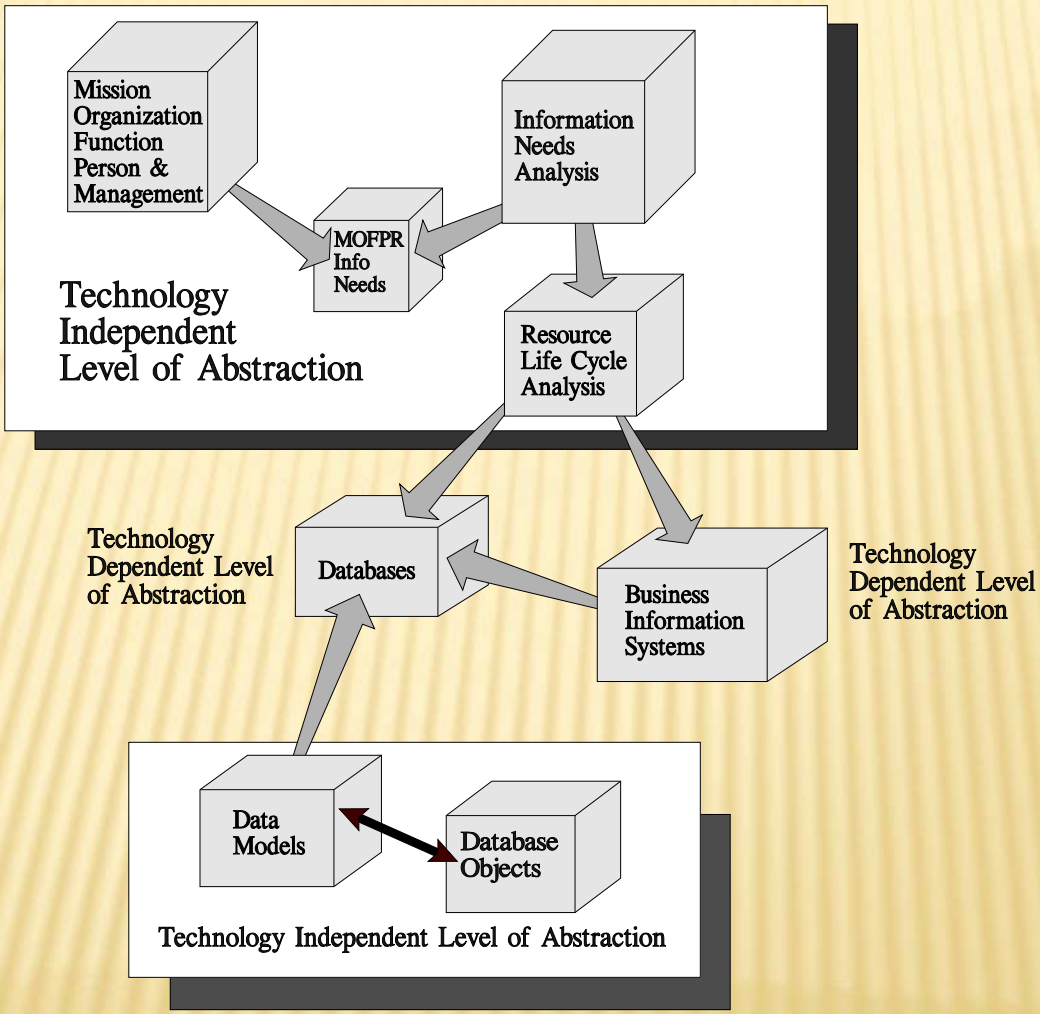
SOLUTION ENGINEERING: BUSINESS INFORMATION SYSTEMS ENVIRONMENTS



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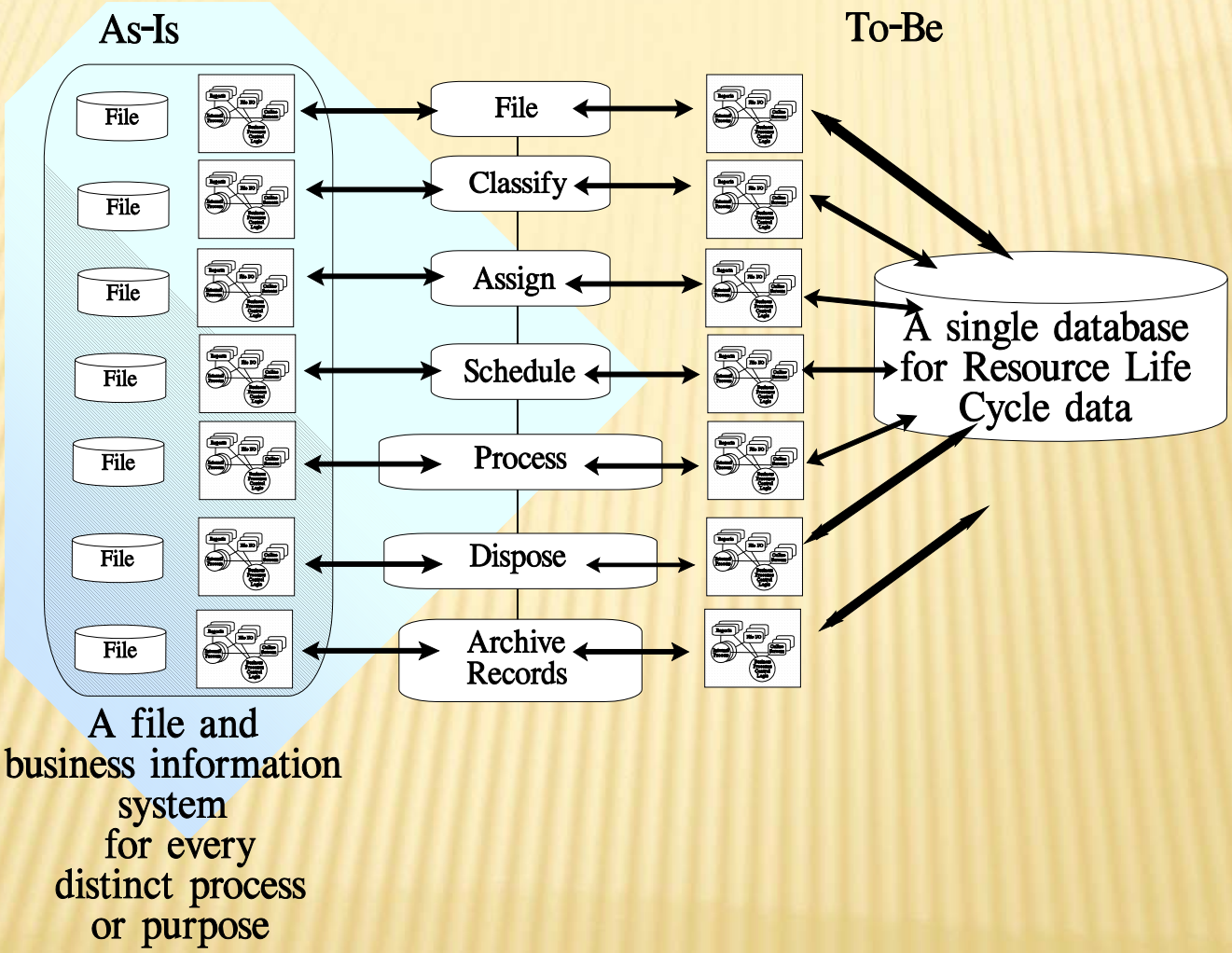
SOLUTION ENGINEERING: BUSINESS INFORMATION SYSTEMS ENVIRONMENTS



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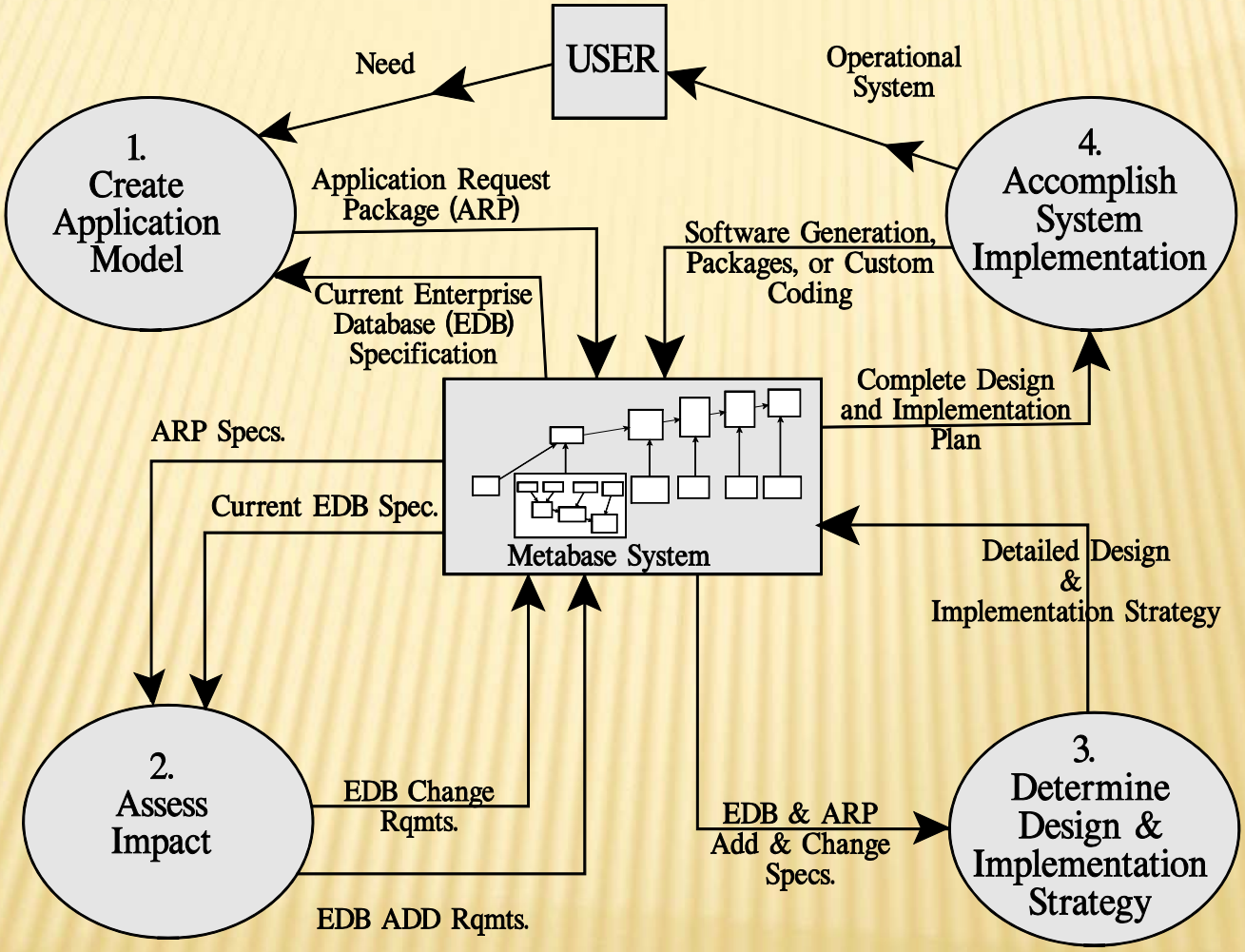
SOLUTION ENGINEERING: BUSINESS INFORMATION SYSTEMS ENVIRONMENTS



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#6 ROI (2.8:1) BUSINESS INFORMATION SYSTEMS MANUFACTURING

- Link: http://www.wiscorp.com/roi_rusinessinformationsystemsmanufacturing.html
- The Issues:
  - Custom designed and programmed business information system components.
  - Differently custom designed and programmed essentially similar business information system component components.
  - Evolved requirements cause significant custom-code rework.
  - Schedules and budgets that almost always fail.

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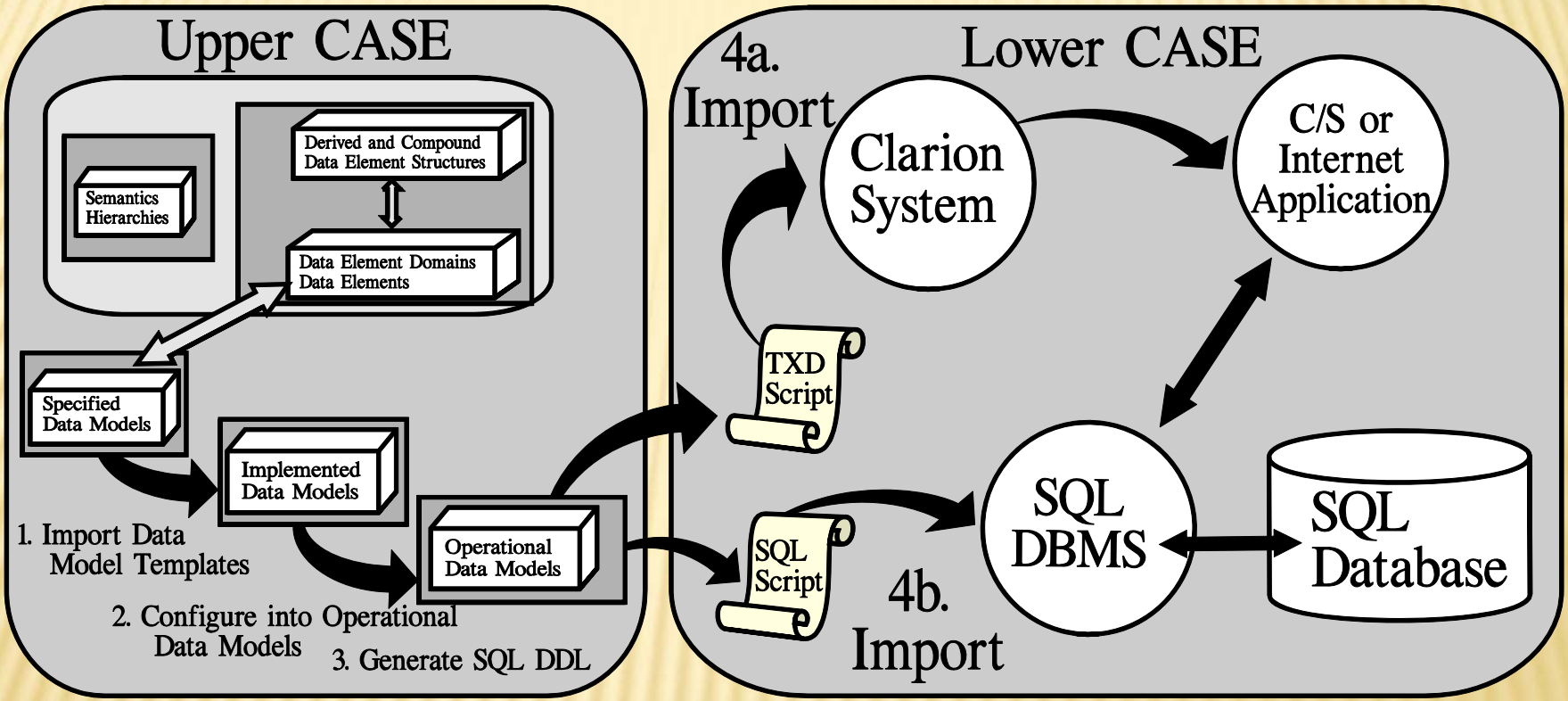
SOLUTION ENGINEERING: BUSINESS INFORMATION SYSTEMS MANUFACTURING



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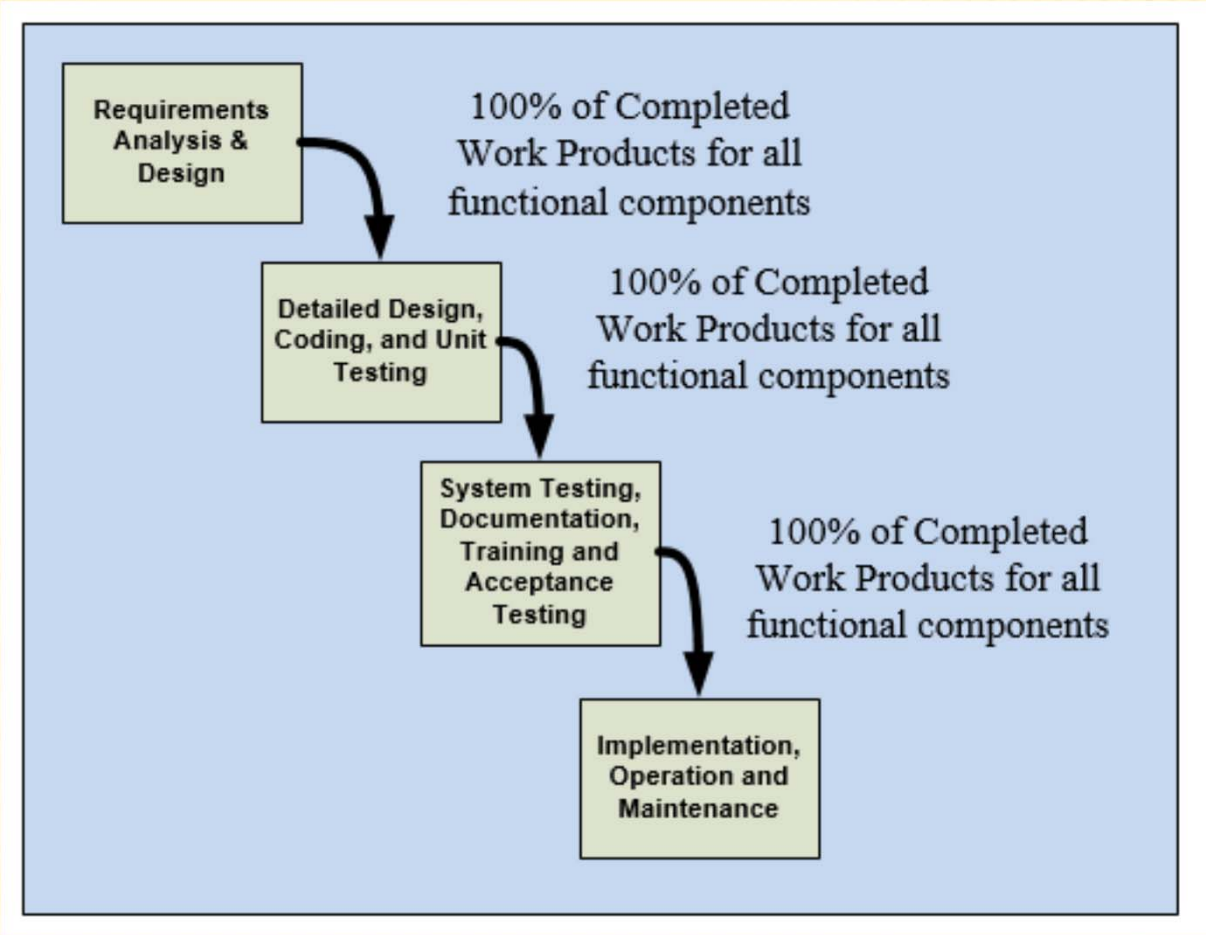
WATER-FALL SDLC: BUSINESS INFORMATION SYSTEMS MANUFACTURING



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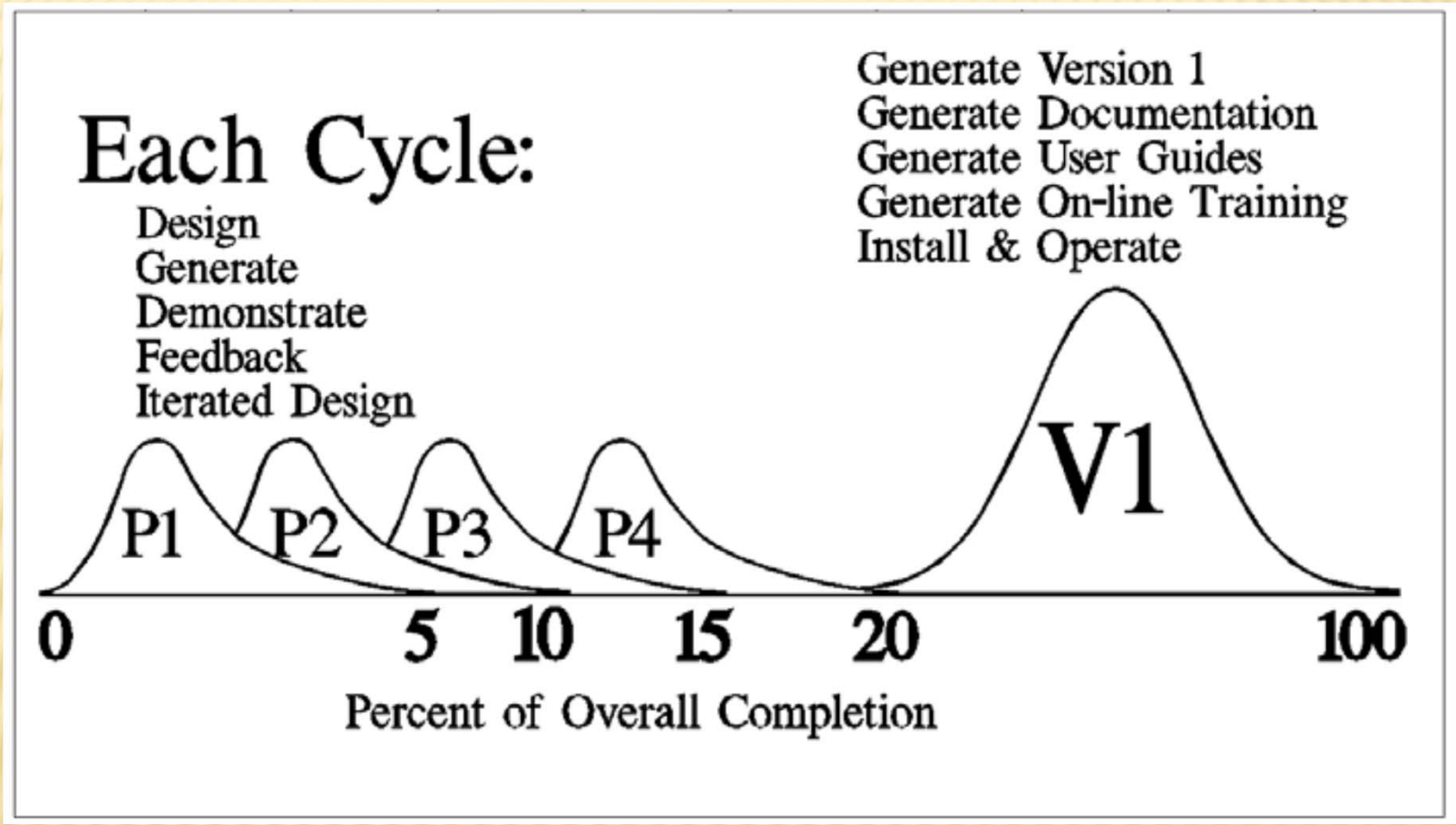
PROTOTYPING & CODE GENERATION: BUSINESS INFORMATION SYSTEMS MANUFACTURING



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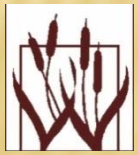
#7 ROI (14.6:1) ENTERPRISE ARCHITECTURE DEVELOPMENT

- Link: http://www.wiscorp.com/roi_enterprisearchitecturedevelopment.html
- The Issues:
  - Top-down Enterprise Architectures mismatch with existing databases and business information systems.
  - Enterprise Architectures are too generalized to be integrated with existing databases and business information systems.
  - Stove-piped Enterprise Architectures are not integrated, interoperable or maintainable with existing databases and business information systems.



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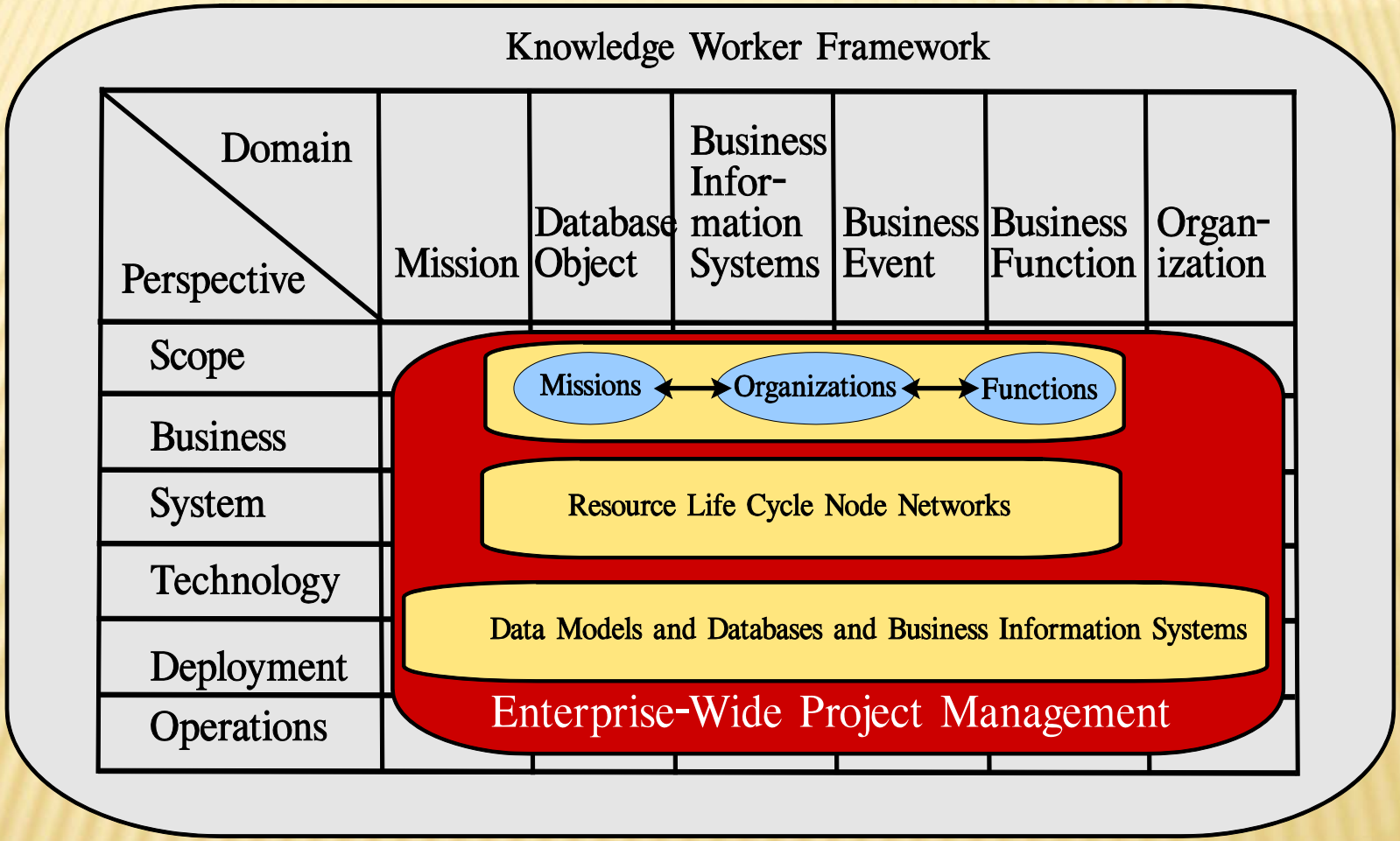
SOLUTION ENGINEERING: ENTERPRISE ARCHITECTURE DEVELOPMENT



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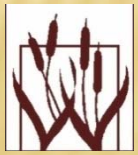
PAYOFF SCENARIO

- Waterfall Approach
- Prototyping & Code Generation Approach
  - Development
  - Development and Maintenance
- Life Cycle Costs
  - Waterfall
  - Prototyping and Code Generation



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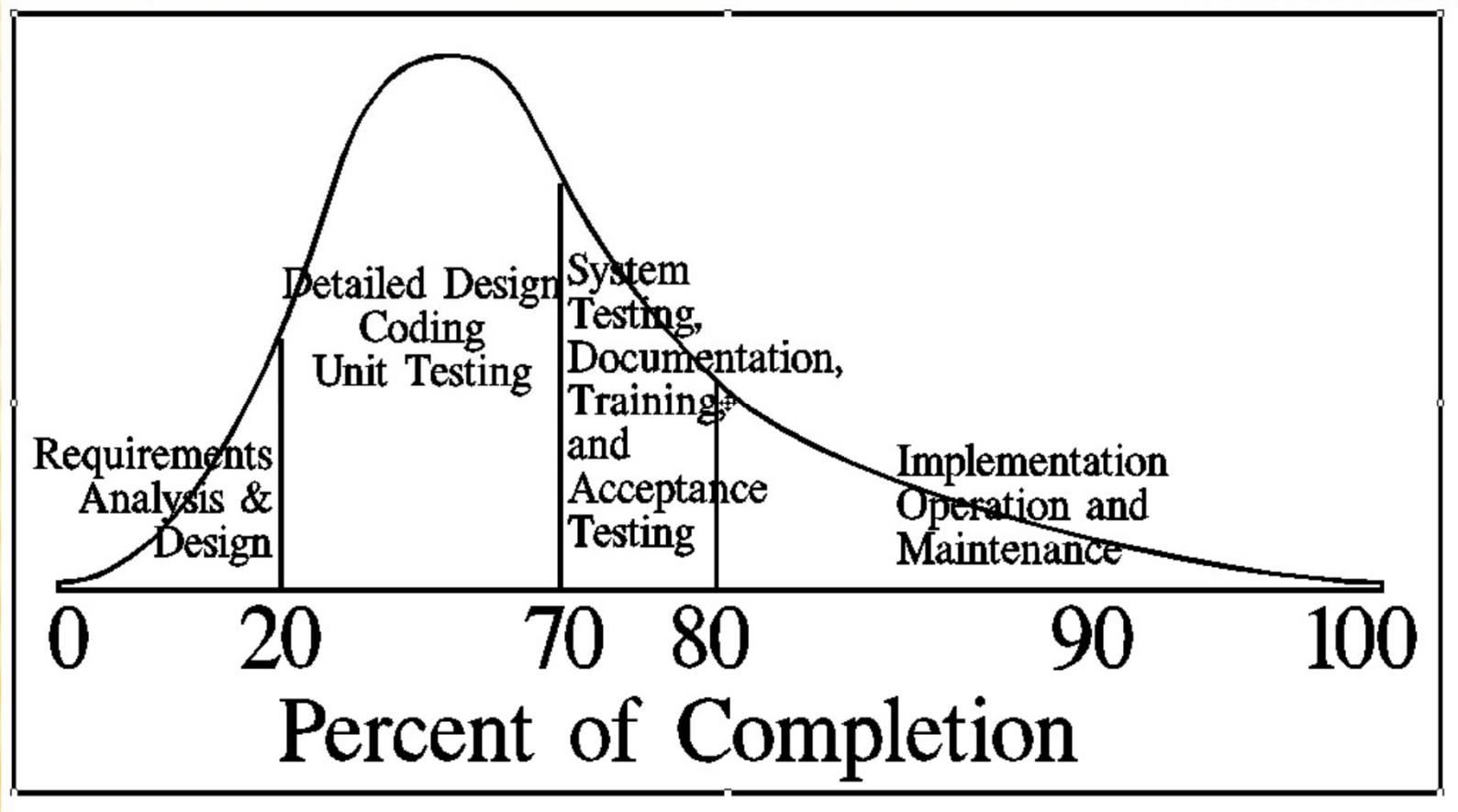
WATERFALL APPROACH: 70% RESOURCES EXPENDED BEFORE VALIDATION



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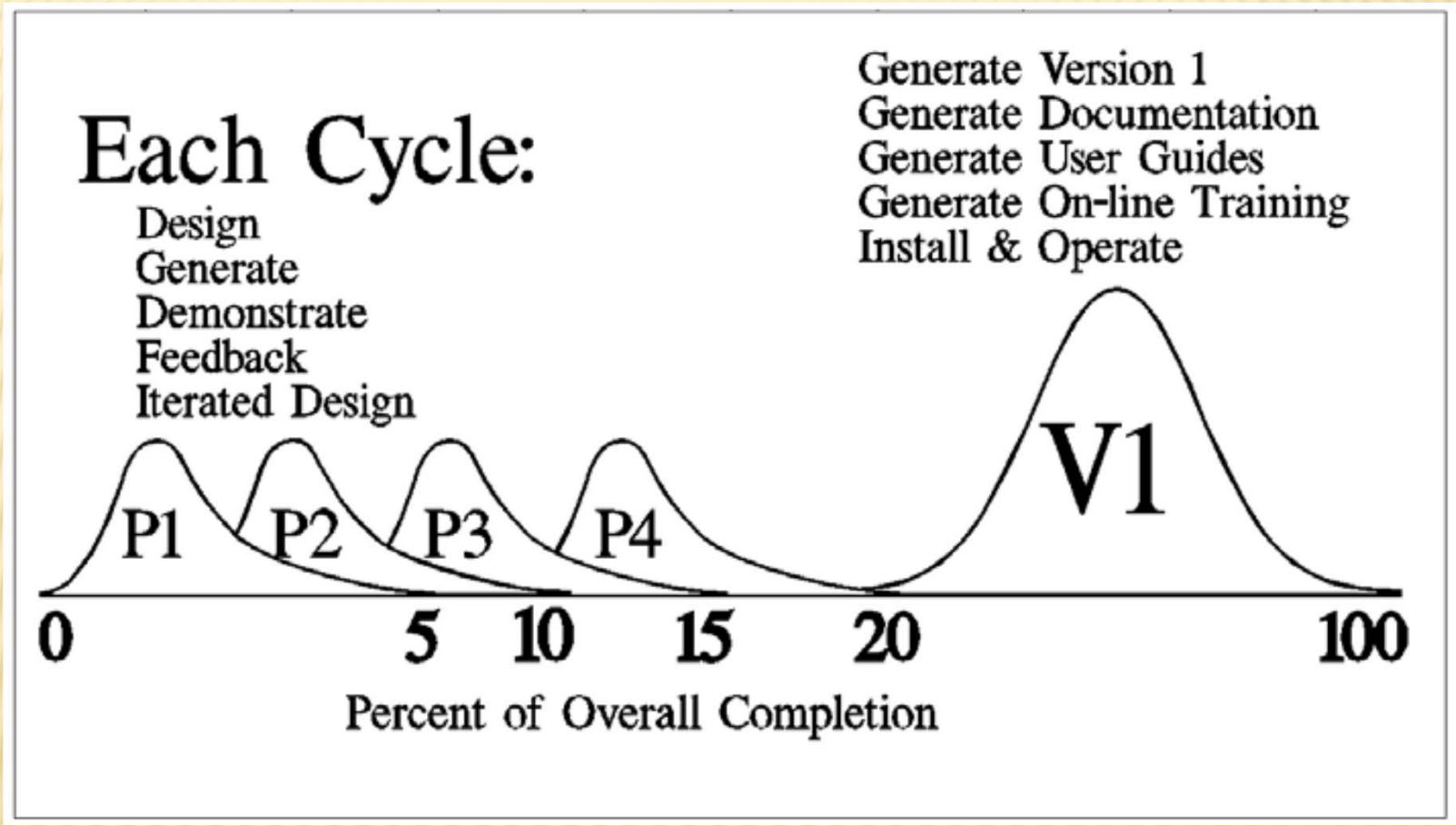
PROTOTYPING & CODE GENERATION APPROACH: DEVELOPMENT



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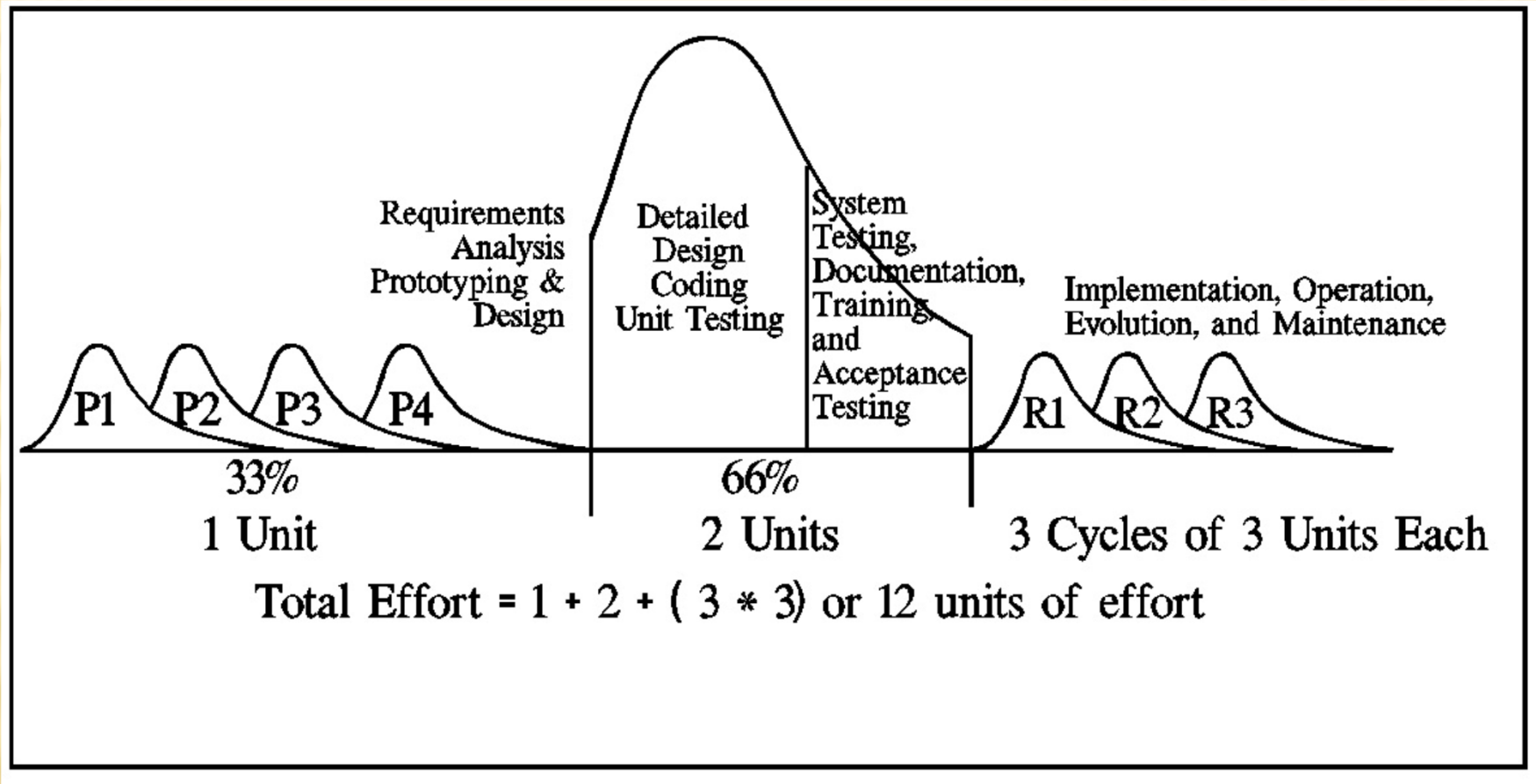
PROTOTYPING & CODE GENERATION: DEVELOPMENT & MAINTENANCE



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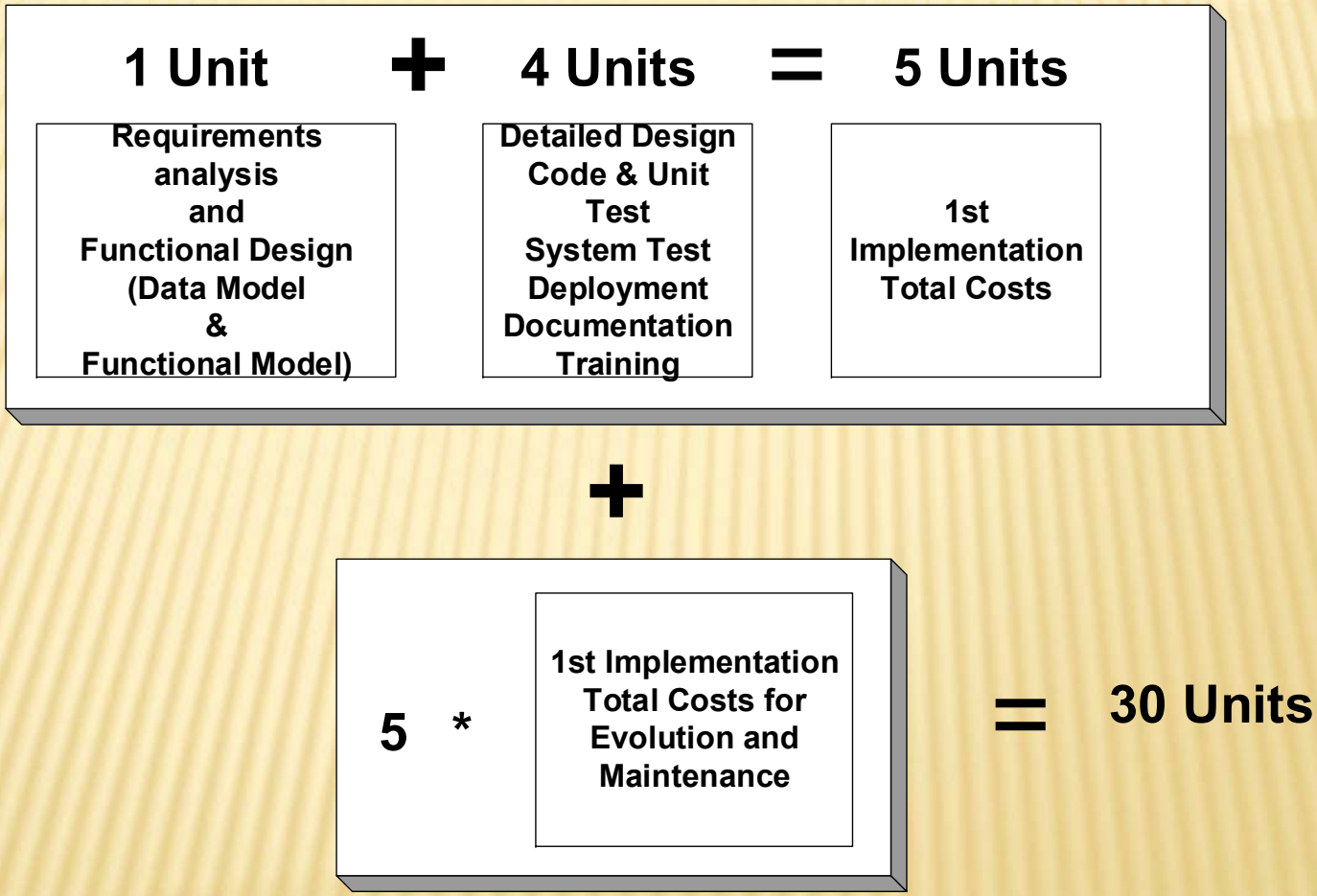
WATERFALL LIFE CYCLE COSTS



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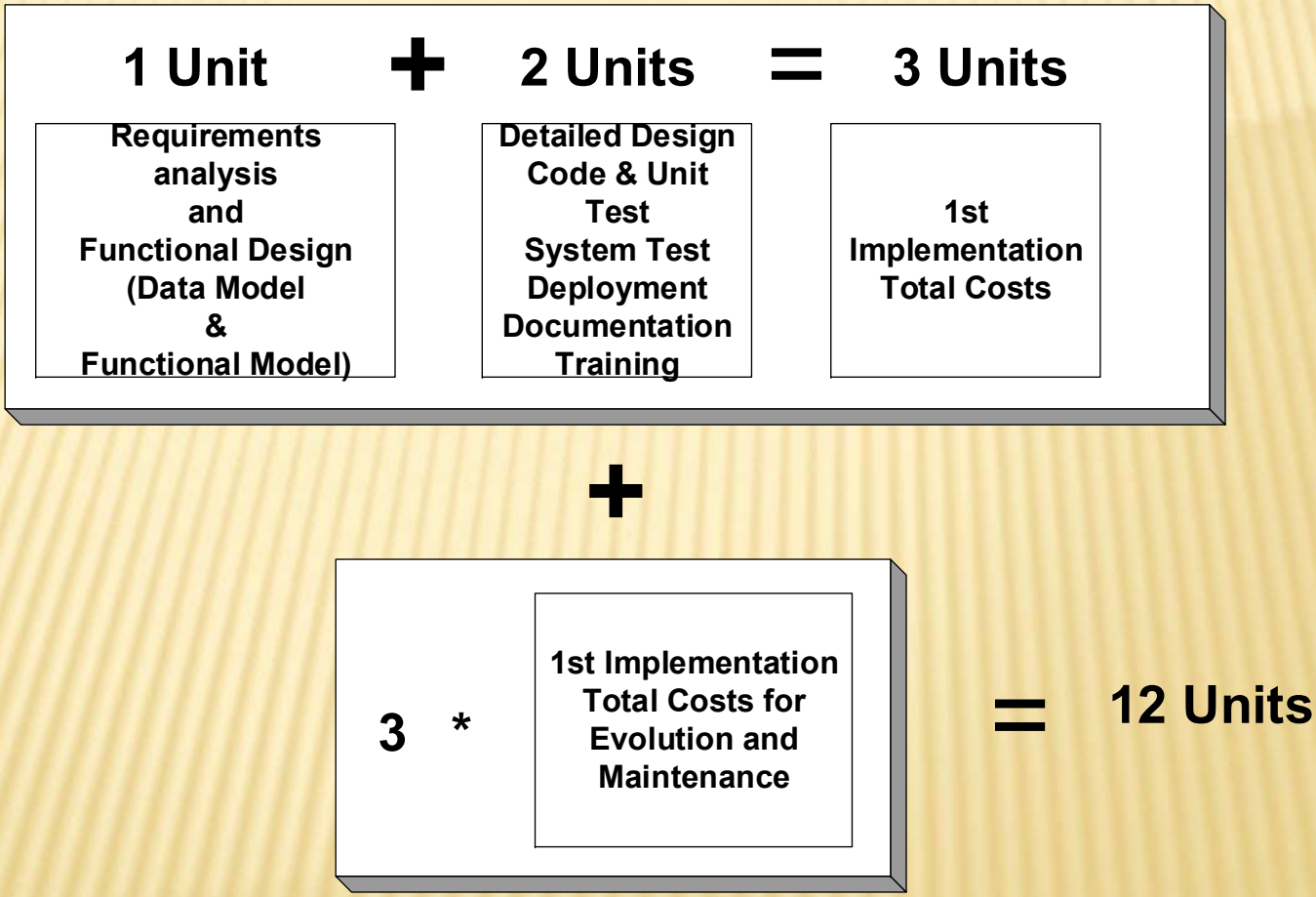
PROTOTYPE & CODE GENERATION LIFE CYCLE COSTS



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ROAD AHEAD

- Evaluate and adopt the Knowledge Worker Framework
- Evaluate and adopt Data-Centered SDLC
- Evaluate and adopt prototyping & code generation to implement version 5 DB & BIS designs versus custom code version 1 DB and BIS design implementations
- Implement Metabase System (Metadata Management)
- Require 100% of Contractor Work Products delivery, update, and management through Metabase System

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WHY SHOULD "I" DO THIS?

- Enterprise-Wide Project Management (16:1 ROI)
- Information Systems Planning (5.9: 1 ROI)
- Data-Centered Development and Management (28:1 ROI
- Data Model Manufacturing (8.6:1 ROI)
- Business Information Systems Environments (7.7:1 ROI)
- Business Information System Manufacturing (2.8:1 ROI)
- Enterprise Architecture Development (14.6:1 ROI)

Simply put, you'll be more productive with higher quality, lower costs with fewer risks.

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WHITEMARSH INFORMATION SYSTEMS CORPORATION

- Founded in 1981
- Website: www.wiscorp.com
- Key Concentration Area: Data Management, Enterprise Architectures and Business Information Systems
- Delivery Mechanisms
  - Knowledge-Ware (books and papers)
  - Software
  - Consulting, Seminars and Workshops

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WHITEMARSH CLIENTS (HTTP://WWW.WISCORP.COM/PAST_CLIENTS_PROJECT_DESCRIPTIONS.HTML)

- Bank of America, California
- Delaware Public Safety Database
- DOD Strategic Defense Initiative Office
- DuPont Corporation
- Federal Government of Canada
- Freddie Mac
- Grumman Data Corporation and BDM International
- Hershey Chocolate Company
- Mars Corporation
- International Committee for Information Technology Standards (INCITS)
- Ohio State Supreme Court
- Prince George's County Board of Education
- State of California
- The MITRE Corporation
- U.S. Army
- U.S. Navy
- U.S. Department of Commerce
- U.S. Department of Homeland Security
- U.S. Department of Veterans Affairs
- U.S. HHS: Social Security Administration
- U.S. Office of Trademarks
- U.S. Office of Personnel Management
- U.S. DoD, Defense Logistics Agency
- U.S. DoD Office of Assistant Inspector General for Audits

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REFERENCES

Reverences	
Topic or Title	**URL**
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Challenge for Business Information Systems Success	http://wiscorp.com/sp/sp19.pdf
Comparative Analysis of Business Information Systems Development Methodologies	http://wiscorp.com/sp/sp27.pdf
Data Architecture Reference Model	http://wiscorp.com/sp/sp28.pdf
Data is Executed Policy	http://wiscorp.com/sp/sp02.pdf
Data Management Independent Verification and Validation	http://wiscorp.com/sp/sp24.pdf
Data Modeler Architecture and Concept of Operations	http://www.wiscorp.com/metabase/MetabaseDataModelerArchitectureandConceptofOperations.zip
Data Models, the Center of the Business Information Systems Universe	http://wiscorp.com/sp/sp20.pdf
Database Objects Overview	http://wiscorp.com/sp/sp23.pdf

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Reverences	
Topic or Title	**URL**
Engineering and Managing Information Systems Plans	http://wiscorp.com/sp/sp11.pdf
Enterprise Architectures	http://wiscorp.com/sp/sp08.pdf
Inductive Enterprise Architecture Development	http://wiscorp.com/sp/sp25.pdf
Managing Data Names, Value Domains, Abbreviations and Definitions	http://www.wiscorp.com/sp/sp03.pdf
Managing the Meaning of Data	http://wiscorp.com/sp/sp01.pdf
Messages that Convey the Value	http://www.wiscorp.com/messagesthatconveythevalue.html
Metabase Reverse and Forward Engineering Users Guide	http://www.wiscorp.com/metabase/MetabaseReverseAndForwardEngineeringUsersGuide.zip
Metabase System and the Knowledge Worker Framework	http://www.wiscorp.com/metabase/MetabaseRationaleKnowledgeWorkerFrameworkandMetaModels.pdf
Metabase System Overview	http://www.wiscorp.com/metabase/MetabaseOverview.zip
Metabase System User Guides	http://www.wiscorp.com/metabase/MetabaseUserGuides.zip
Metadata, The Information Technology Intellectual Property of the Enterprise	http://wiscorp.com/sp/sp21.pdf
Modeling Data and Designing Databases	http://wiscorp.com/sp/sp06.pdf

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Resource Life Cycle Management: The Enterprise Architecture Component Integrator	http://wiscorp.com/sp/sp10.pdf
RFP Development	http://wiscorp.com/sp/sp18.pdf
ROI: Business Information Systems Environment	http://www.wiscorp.com/roi_businessinformationsystemenvironments.html
ROI: Business Information Systems Manufacturing	http://www.wiscorp.com/roi_rusinessinformationsystemsmanufacturing.html
ROI Data Centered Development and Management	http://www.wiscorp.com/roi_datacentereddevelopmentandmanagement.html
ROI: Data Model Manufacturing	http://www.wiscorp.com/roi_datamodelmanufacturing.html
ROI: Enterprise Architecture Development	http://www.wiscorp.com/roi_enterprisearchitecturedevelopment.html
ROI: Enterprise Wide Project Management	http://www.wiscorp.com/roi_enterprisewideprojectmanagement.html
ROI: Information Systems Planning	http://www.wiscorp.com/roi_informationsystemsplanning.html
Whitemarsh Project Management	http://wiscorp.com/WhitemarshProjectManagementArchitectureAndConceptOfOperations.pdf

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