



Construction CALS/EC in Korea

- Plan and Implementation experience -

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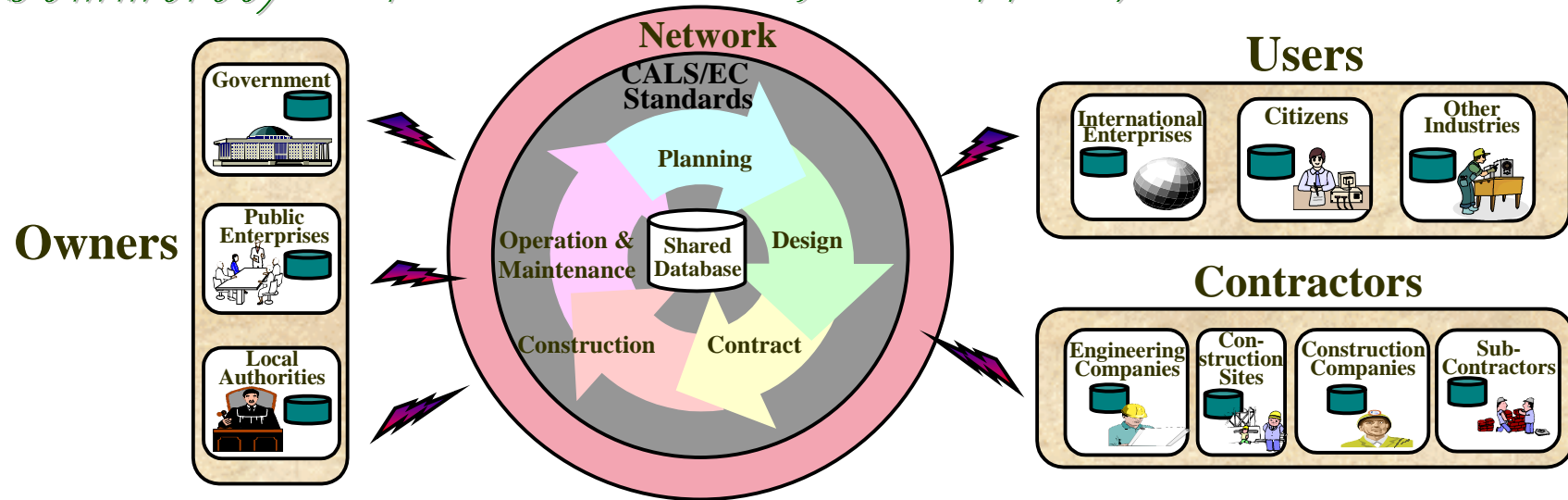
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- 1. Concept**
- 2. Overview**
- 3. Strategies**
- 4. Action Plan**
- 5. Organizations**
- 6. Benefits**
- 7. Profiles of Important Projects**

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What is Construction CALS/EC in Korea?

(Continuously) Acquisition & Life-cycle Support / Electronic



Integrated information systems that is shared and can be exchanged by the owners, contractors and users through information network. Initiated by the Ministry of Construction and Transportation, the Construction CALS/EC allows them to use the digital product data throughout all stages of construction including planning, design, construction and maintenance



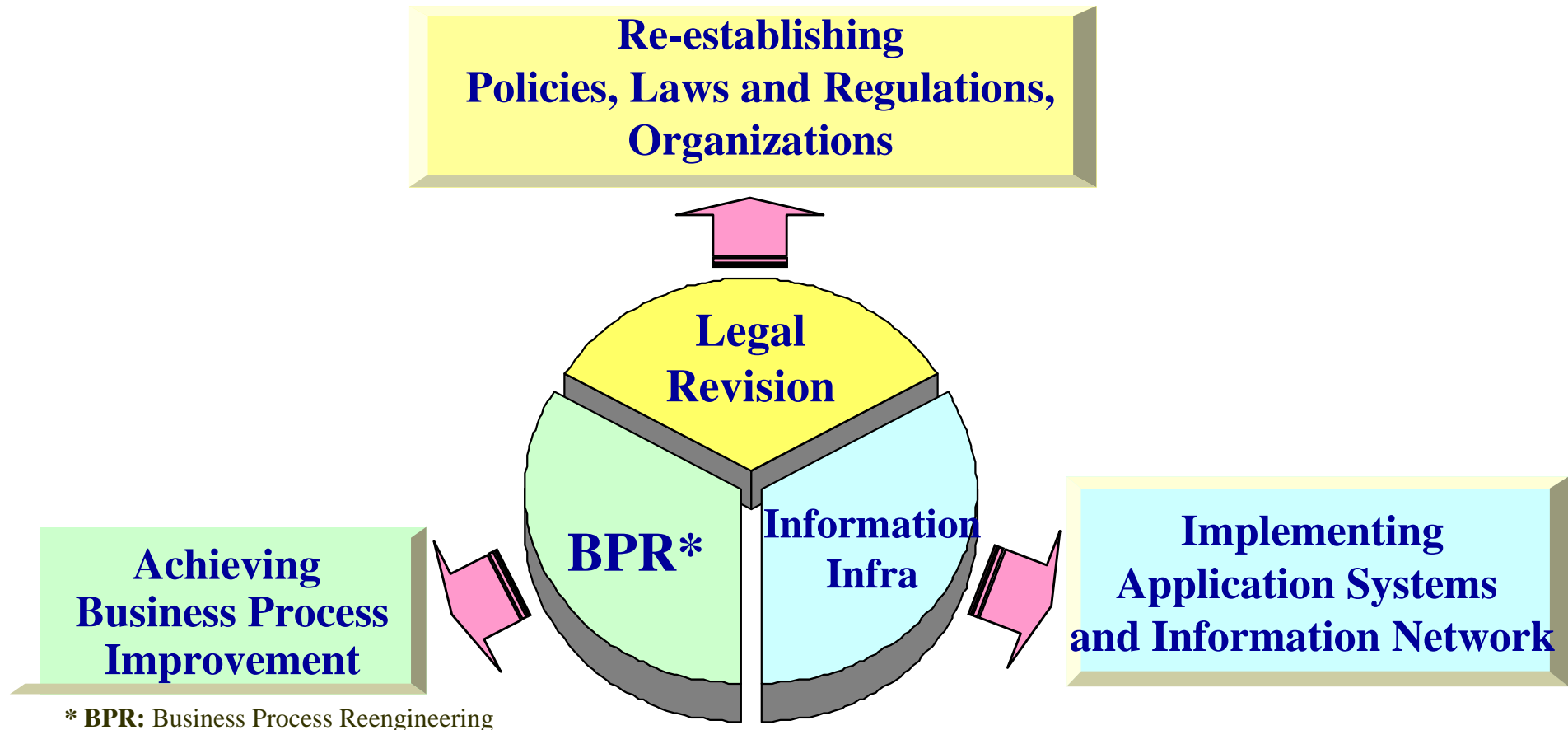
Objectives

- **Create Knowledge-based Society**
- **Establish Efficient Digital Government**

History

- **Dec. 1996: Amended Regulations to provide Legal Foundation for Construction CALS/EC**
- **Feb. 1997: Selected as Focal Project for National Informatization**
- **Jun. 1998: Drew up Construction CALS/EC Master Plan**
- **Mar. 2000: Adopted and began Implementation of Detailed Annual Action Plans**

- **Government:** Establishing Standards for CALS/EC, Put Laws and Regulations in Order
- **Industries:** Establishing Information Infrastructures, Developing Application Systems



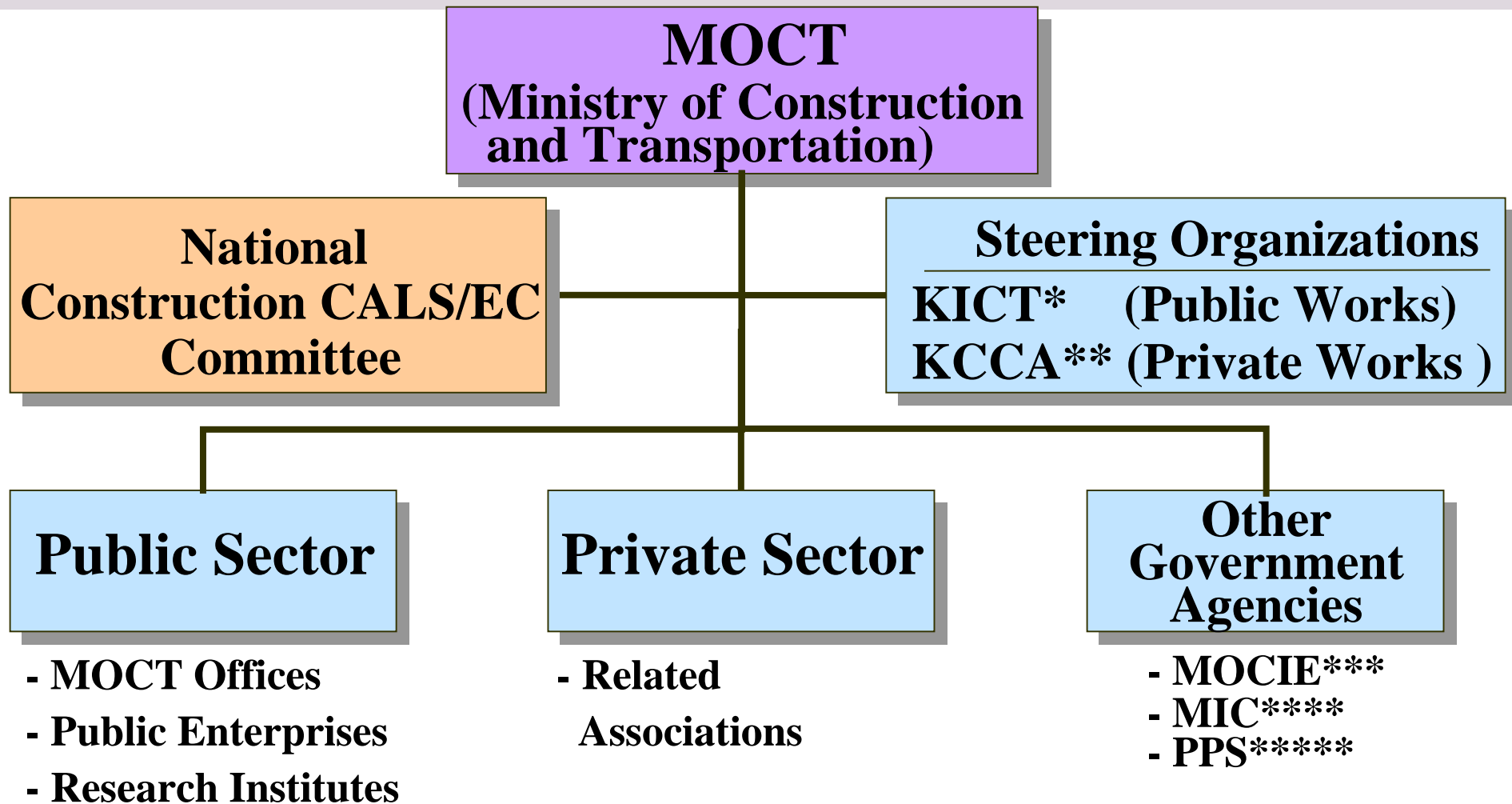
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	1998	1999	2000	2001	2002	2003	2004	2005
BPR		Administrative Services						
			Electronic Procurement					
			Construction Project Management					
			Construction CITIS*					
				Infrastructure Management				
Infra-structure Improve- ment					IETM**			
		CALS/EC Standards						
					CALS/EC IDE***			
				Other Systems Integration				
Legal Revision	Plan	Re-establishment of Organizations & Regulations						
		Education and Public Relations						

* CITIS: Contractor Integrated Technical Information Services

** IETM: Interactive Electronic Technical Manual

*** IDE: Integrated Data Environment



* **KICT**: Korea Institute of Construction Technology
 ** **KCCA**: Korea Construction CALS Association
 *** **MOCIE**: Ministry of Commerce, Industry and Energy
 **** **MIC**: Ministry of Information and Communication
 ***** **PPS**: Public Procurement Service

☐ **Saving Time and Cost**

- **Construction Time Saving by 15~20%**
- **Life Cycle Cost Saving by 10~20%**

☐ **Reducing Paper Documents and Processing Time**

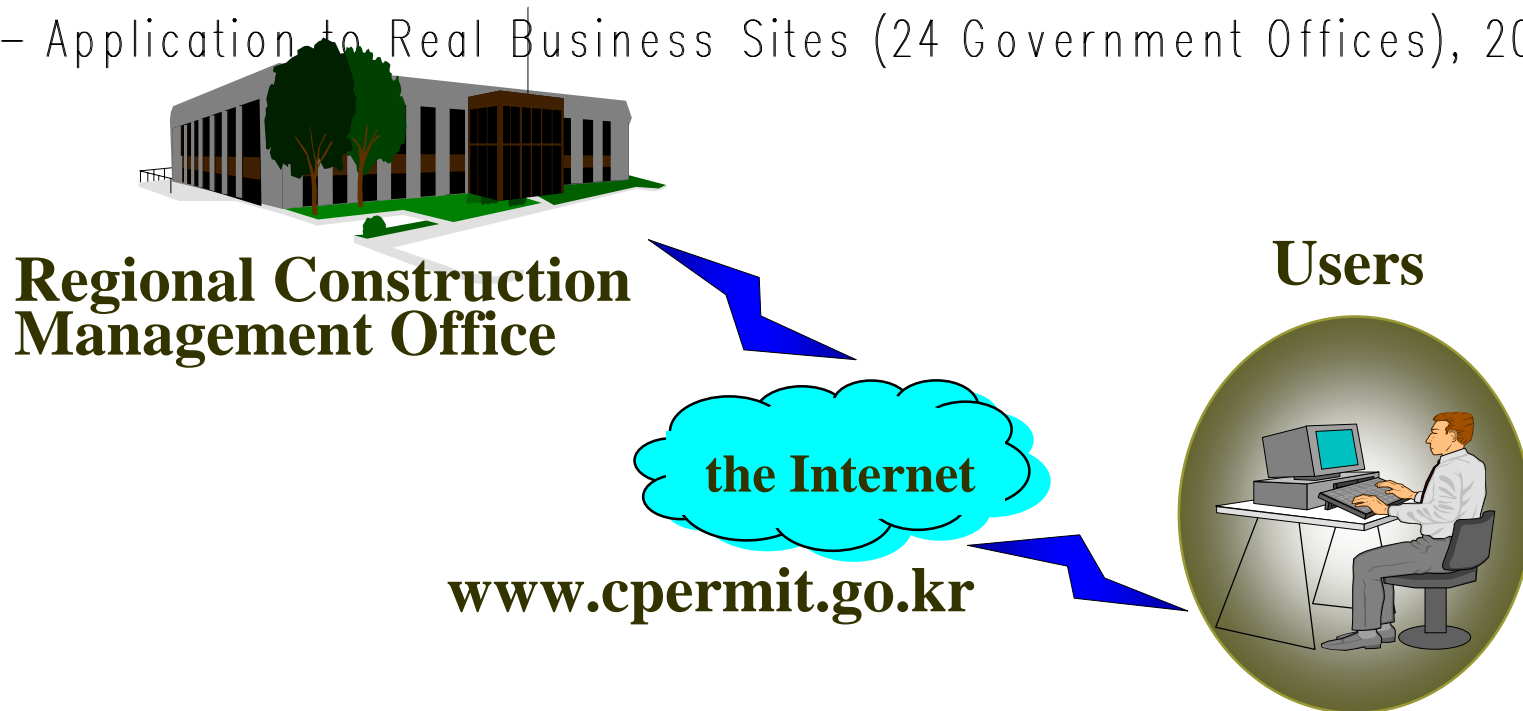
- **Paperless Operations**
- **Reduce Time for Administrative Services by 90%**
- **Reduce various Forms and Design Document by 80~90%**

☐ **Improving Construction Quality and Safety**

- **Easy Access to Technology Data**
- **Efficient use of Shared Information**

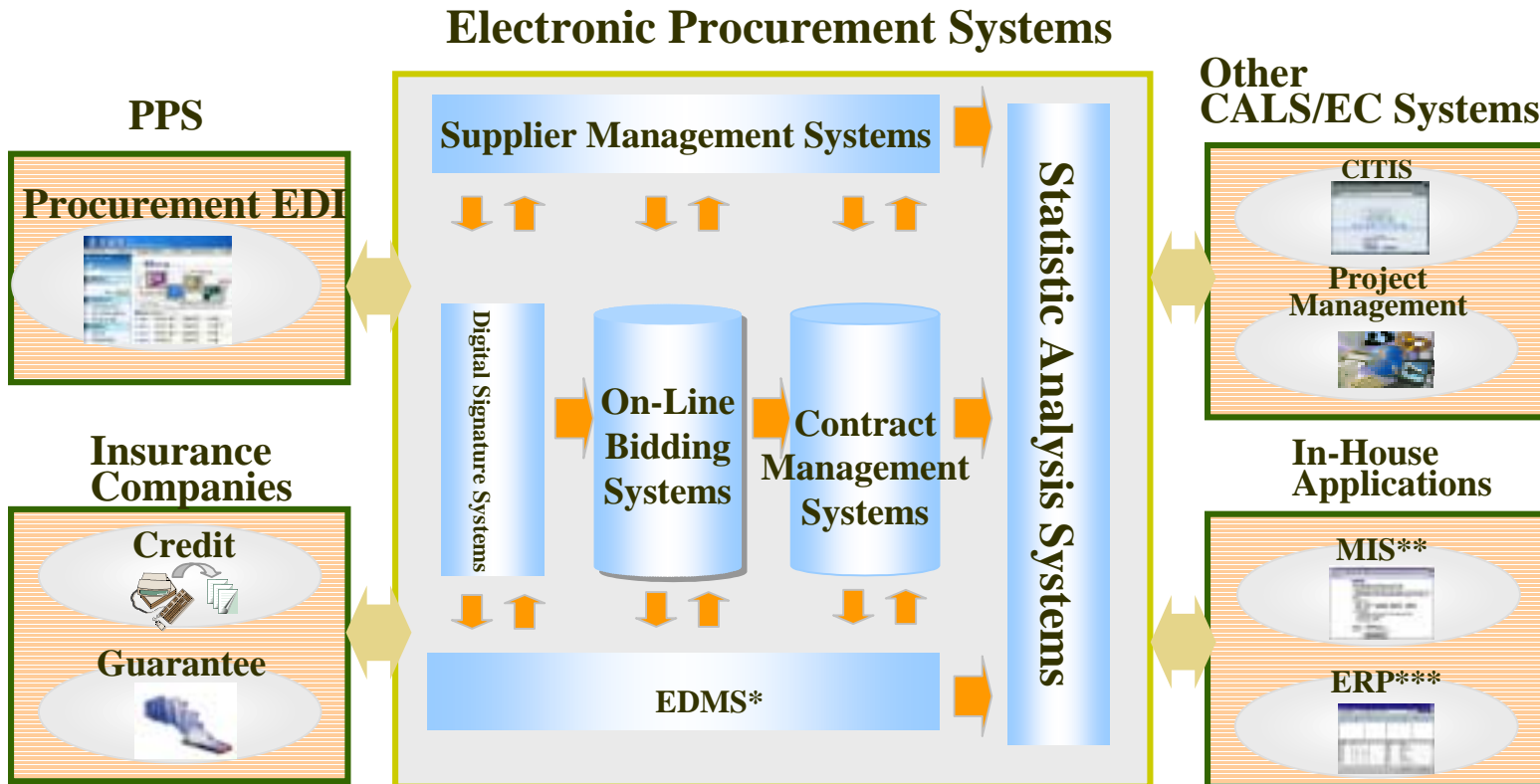
Profiles of Important Projects

- . Project Period: 1999 2002 (4 Years)
- . Objective: Improve Efficiencies in Administrative Activities
- . Current Status
 - System Developments & Test Operation (40 Business Types), 1999 2001
 - Application to Real Business Sites (24 Government Offices), 2002



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- . Project Period: 2000 ~ 2002 (3 Years)
- . Objective: Introduce Electronic Commerce to Public Procurement
- . Current Status
 - Information Strategic Planning for Electronic Procurement, 2000~2001



* **EDMS**: Electronic Document Management Systems

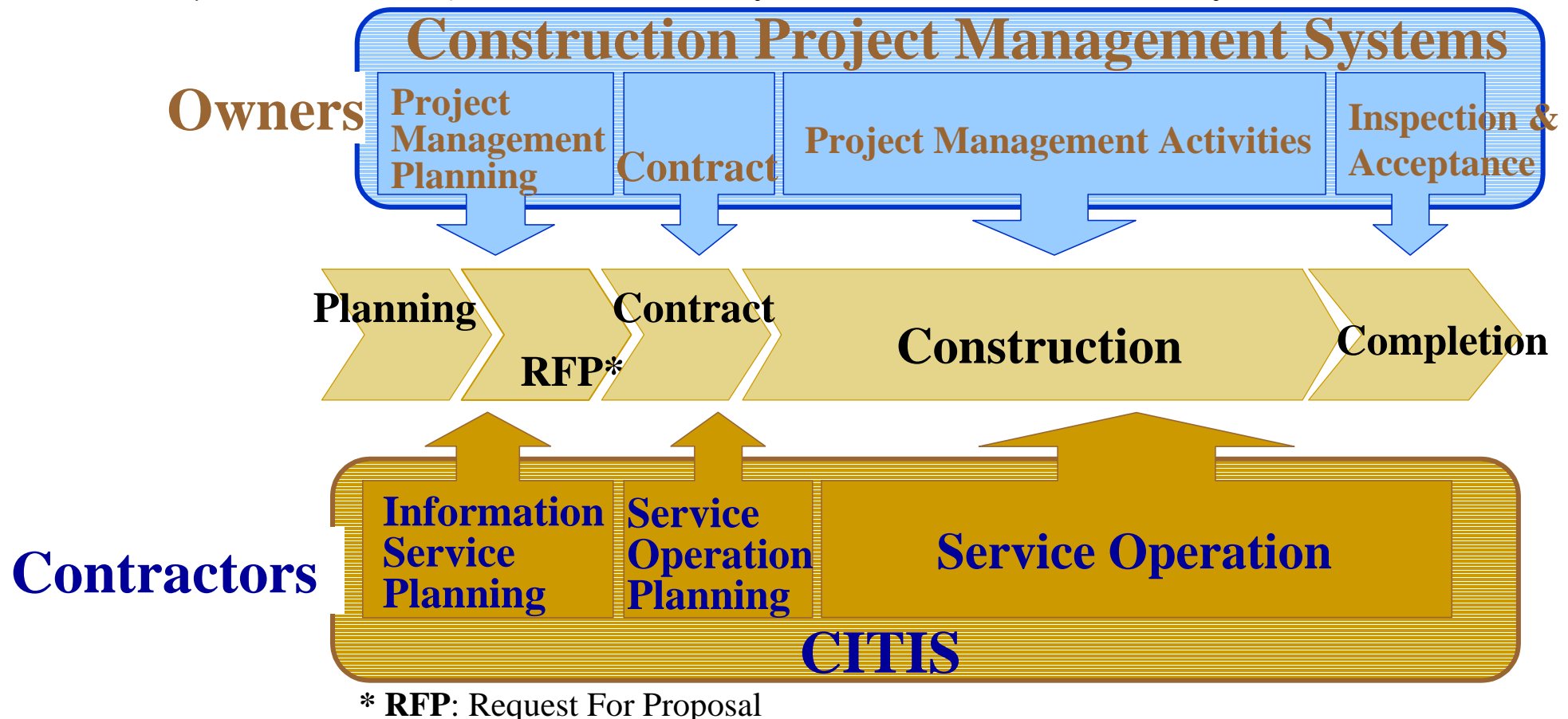
** **MIS**: Management Information Systems

*** **ERP**: Enterprise Resources Planning



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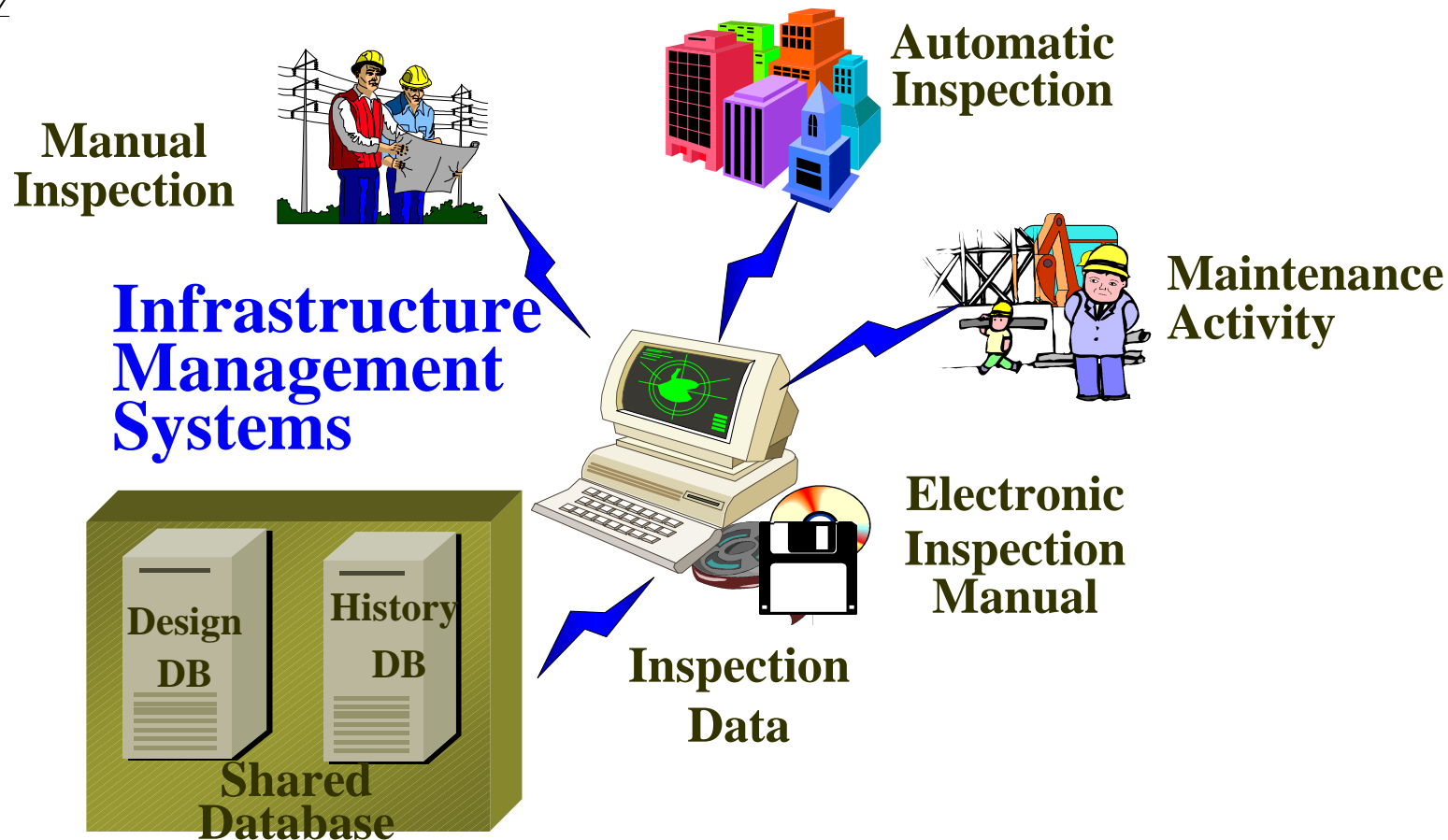
- . Project Period: 2000 2003 (4 Years)
- . Objective: Information Sharing between Owners and Contractors
- . Current Status
 - System Developments for Construction Stage, 2000
 - System Developments for Design and Maintenance Stage, 2001





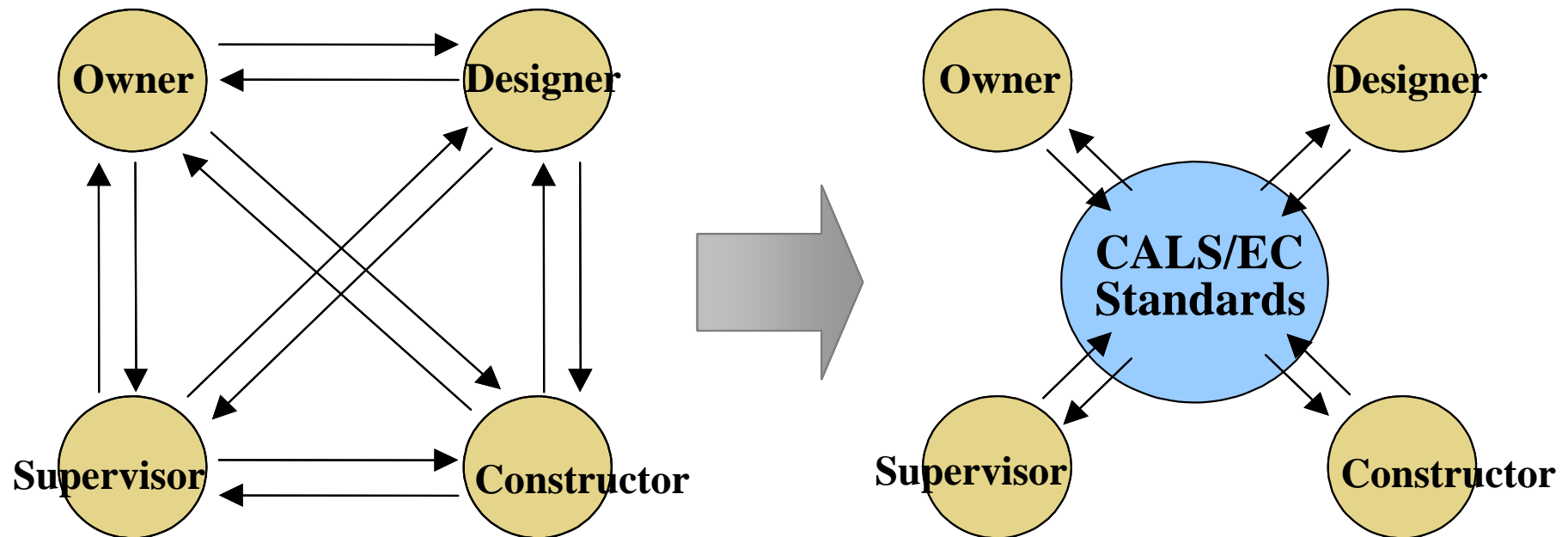
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- . Project Period: 2001 2005 (5 Years)
- . Objectives: Extend Lifetime and Reduce Maintenance Cost
- . Current Status
 - Information Strategic Planning for Infrastructure Management Systems, ~2002



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- . Project Period: 1999 2005 (7 Years)
- . Objective: Develop Core Technologies and Information Standards
- . Current Status
 - Standard Developments for
 - > Digital Drawings (STEP*)
 - > Electronic Documents (XML** DTD***)
 - > Information Classification



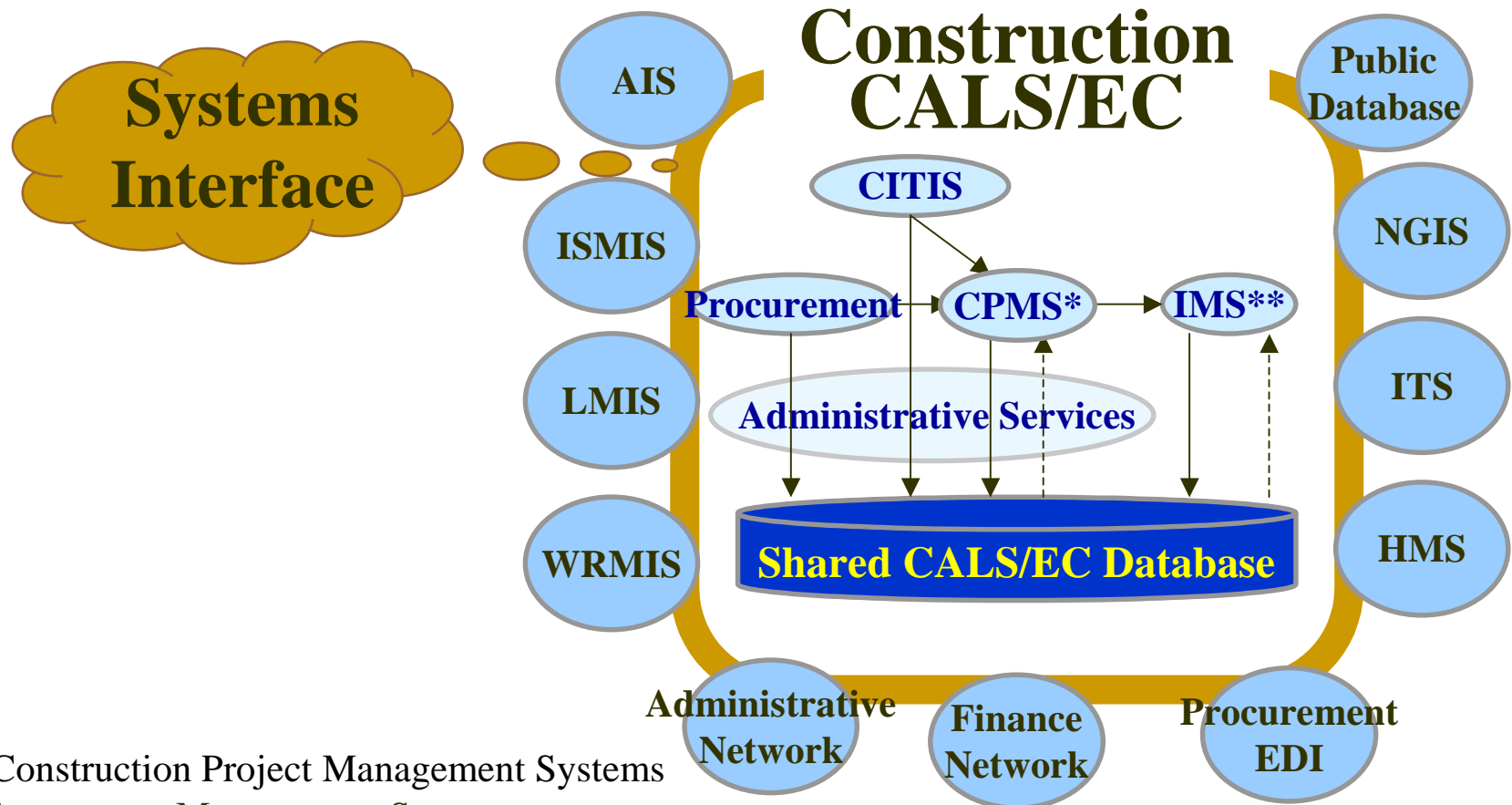
* **STEP**: SStandards for the Exchange of Product model data

** **XML**: eXtensible Markup Language

*** **DTD**: Document Type Definition

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- . Project Period: 2001 2005 (5 Years)
- . Objective: Support Seamless Integration of the Other Systems to CALS/EC
- . Current Status
 - Information Strategic Planning, 2001~2002



* **CPMS**: Construction Project Management Systems

** **IMS**: Infrastructure Management Systems

THANK YOU