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Construction IT in Korea

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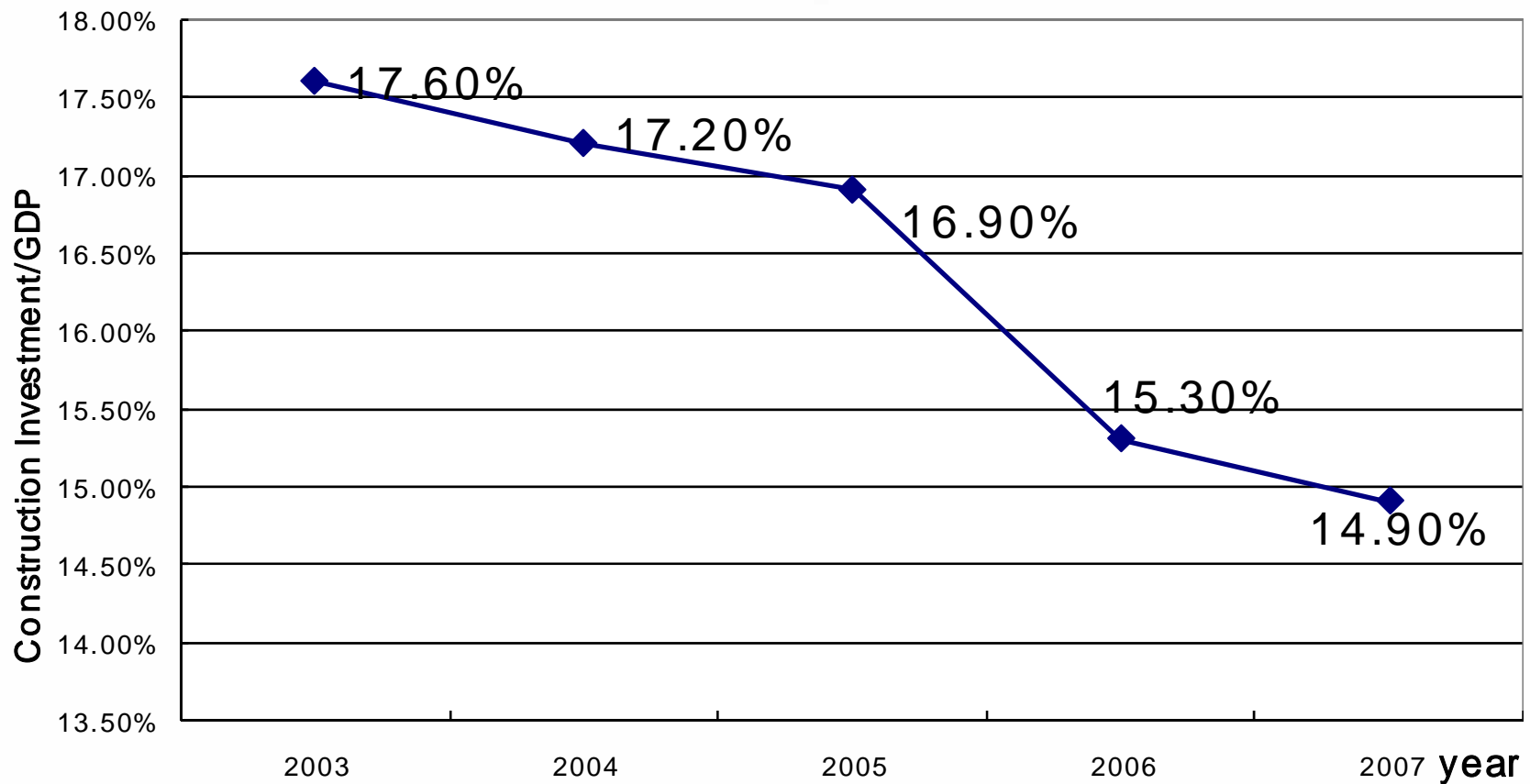
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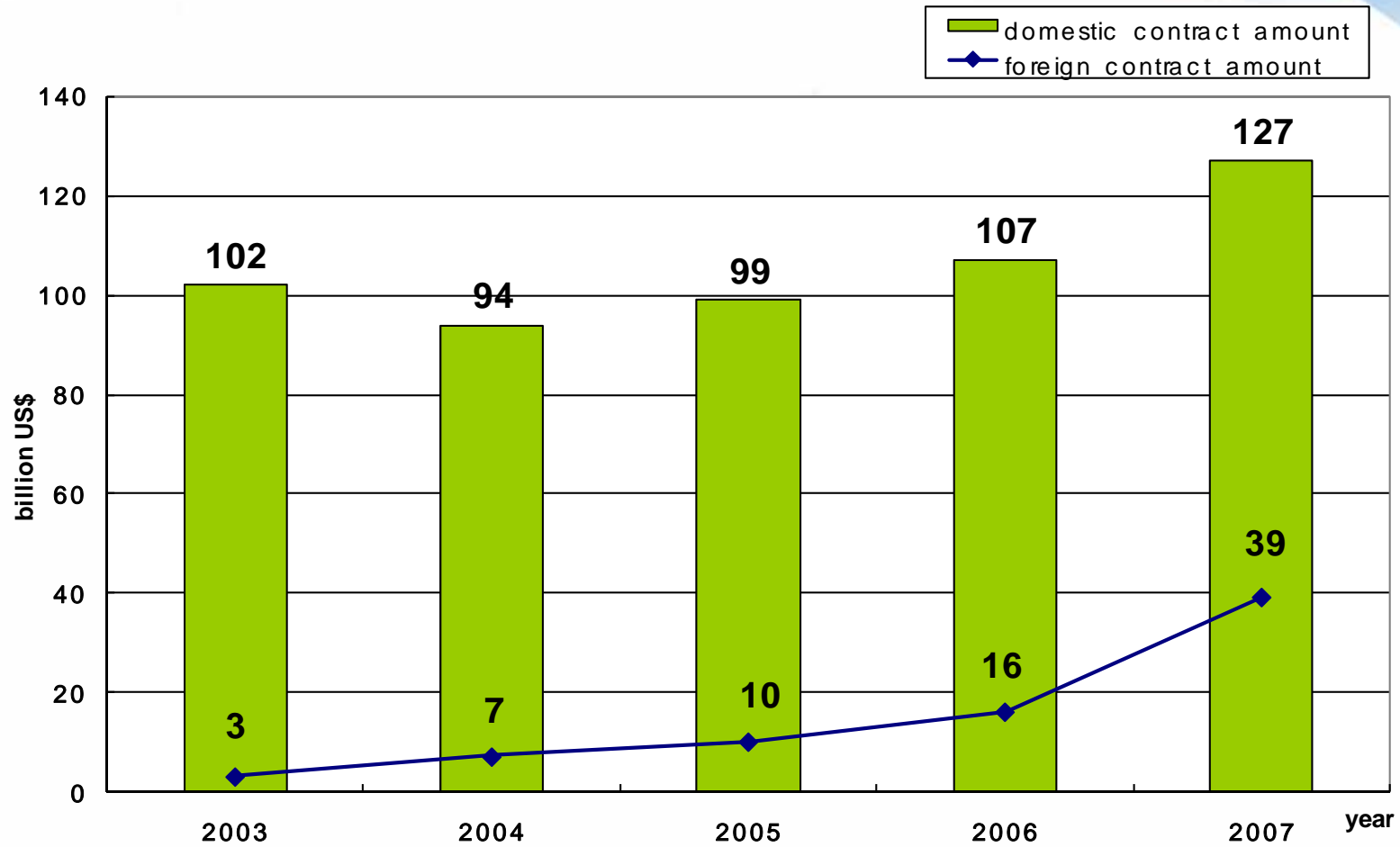
- **GDP-to-Construction Investment Ratio**
- **Contract Amount**
- **Government Policy on Construction IT**

GDP - to - Construction Investment Ratio

- **Construction investment : 14.9% of GDP**



Contract Amount



Ministry of Land, Transport and Maritime Affairs (MLTM)

- **Promoting the U-City construction**
 - Enforcement of the U-City law
 - Competitive advantage by R&D investment
 - U-City project : DongTan new town('07), YongIn('08), WoonJung('09), PanGyo('09), KwangGyo('10), SeJong City('12), SongDo('13)
- **Location Based Services and High-Tech Transportation industry**
 - Early construction of ITS(Intelligent Transport System) infrastructure
 - 3D digital map and National Spatial Data Infrastructure ('12)

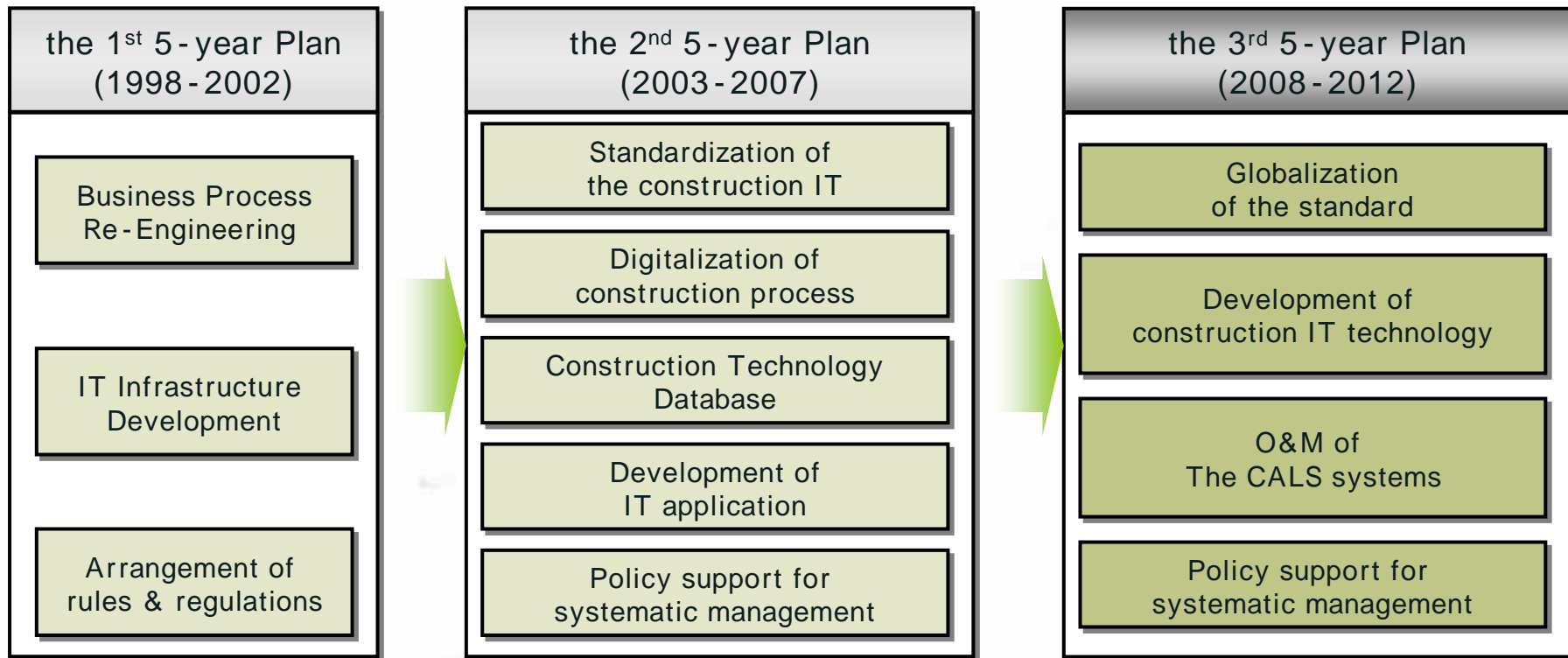
Ministry of Knowledge Economy (MKE)

- **Construction IT industry:** New growth power
- **New IT Strategy**
 - Cooperation between IT industry and other industry
 - Key industries : automobile, shipbuilding, medical service, construction, defense industry
- **Making high-tech construction environment** using
 - civil engineering technology
 - building material technology
 - construction management technology
 - energy saving technology
 - Construction IT.

- **Project History**
- **Current Status of CALS system**
- **5-year plan for the Construction CALS**

Project History

- ❑ 1st 5-year plan (1998-2002) : Development of the construction CALS Infrastructure
- ❑ 2nd 5-year plan (2003-2007) : Advancement of the construction CALS
- ❑ 3rd 5-year plan (2008-2012) : Dissemination of the construction CALS



Current Status of the Construction CALS

- Use of the Construction CALS systems (: in use, : under development)

Agency	Current status by construction phase											
	pre-design phase	design phase					construction Phase					O&M phase
		Owner	Contractor	Document management	Approval/Permission	The others	Owner	Contractor	Document management	Approval/Permission	The others	
MLTM(construction CALS)												
MLTM(port CALS)												
Korea national housing corporation												
Korea Water Resources Corporation												
Korea Expressway Corporation												
Korea Land Corporation												
Korea Rail Network Authority												
Incheon International Airport Corporation												

Current Status of the Construction CALS

- Use of the Construction CALS Standards**

(: in use)

Agency	Classification	CAD Drawing standard	Electronic Delivery	CAD file Exchange standard	Electronic Document Standard	Cost Information standard	Principles of standards	Operating regulations
Korea national housing corporation								
Korea Water Resources Corporation								
Korea Expressway Corporation								
Korea Land Corporation								
Incheon International Airport Corporation								
Korea Rail Network Authority								
Korea Port & Harbour Association								
MLTM(Regional Construction Management Office)								

3rd 5-year Plan for the construction CALS

Vision

World's leading Construction CALS

Goal

Globalization of construction IT

Competitive advantage of construction CALS

Dissemination of construction CALS systems

Implementation of national construction information system

Policy Goal

1. Promote the CALS standard to the national standard
2. Enhance the level of construction IT in public sector
3. Apply the construction CALS in all public works
4. Management cost saving up to 20%

Strategy

1. Globalization of the standard
2. Development of construction IT technology
3. O&M of the CALS systems
4. Pursuing the policy for systematic control and management

3rd 5-year Plan for the construction CALS


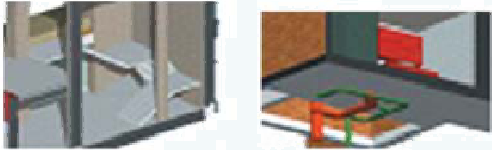

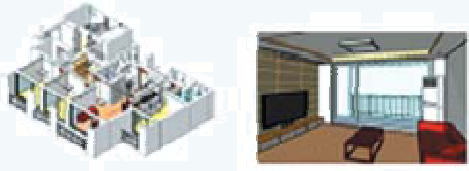
Category	Key project
Standardization	Establishment of standard systems for information sharing and exchange
	Development of standards information usage and circulation
	International cooperation in standards
R&D	Research on business process improvement
	Research on applying new technology for the construction CALS systems
	Implementation of real-time information service
O&M	Stable operation and improvement of the construction CALS systems
	Applying the Construction CALS in both public & private sector
	Education and publicity
Policy development	Performance management
	Pursuing the policy

- **BuildingSMART(IAI) Korea**
- **BIM applications in construction**
- **Pilot projects**
- **Multifunctional Administrative City**

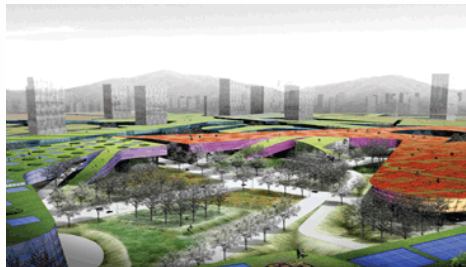
BuildingSMART (IAI) Korea

- **IAI Korea Chapter started** : 1998
- Renamed to '**buildingSMART Korea**' : Apr. 2008
- **Members** : 52 companies, 11 associations, 27 universities , total 90
- **Missions**
 - Dissemination of the advanced technology
 - Research on the standards for the interoperability among BIM softwares and its field application
 - Reflect the Korean characteristics in establishment of international standards in AEC industries

BIM applications in construction

Company	BIM in construction	
A	Reduce the construction duration by checking interference	
B	Correct the drawings and construction method during the construction	
C	Correct the Design error	
D	Development of unit plans in apartment	

- **BIM in the new city project**
 - Requirement for acceptance certification
: 3D model
 - Incorporate the BIM into 3D GIS
: Urban planning, Facility management
 - Use BIM to design major buildings
: Government buildings, Super tall buildings





Thank you



