

*Asian Construction IT Round Table Meeting  
Tokyo, Japan 2009. 08. 05 ~ 2009. 08. 07*

# **Construction IT in Korea**

*06. Aug. 2009*

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# **I . Current Status of Construction Industry**

# **II . Government Policy on Construction**

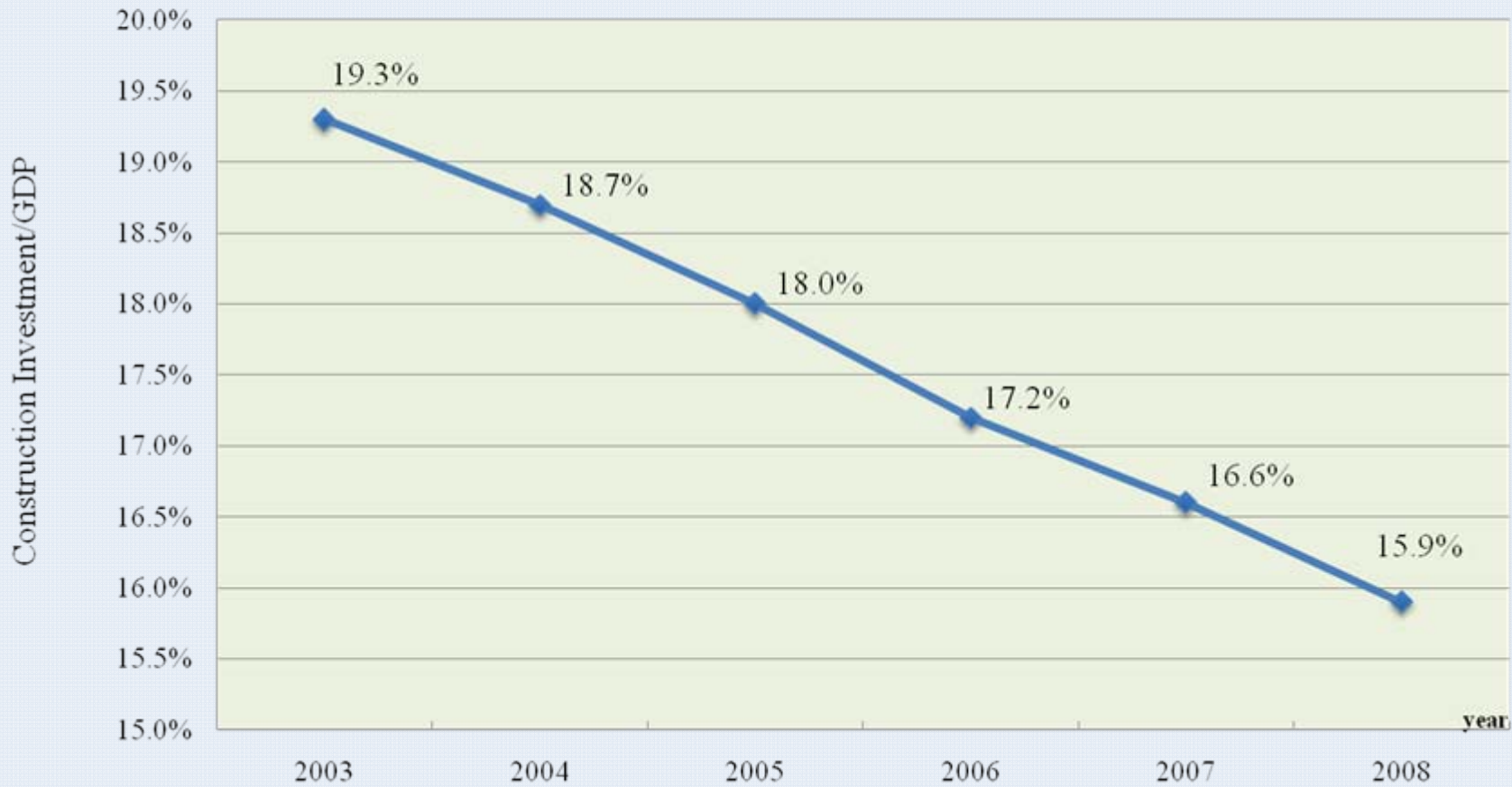
# **III . Construction CALS in Korea**

# I . Current Status of Construction Industry

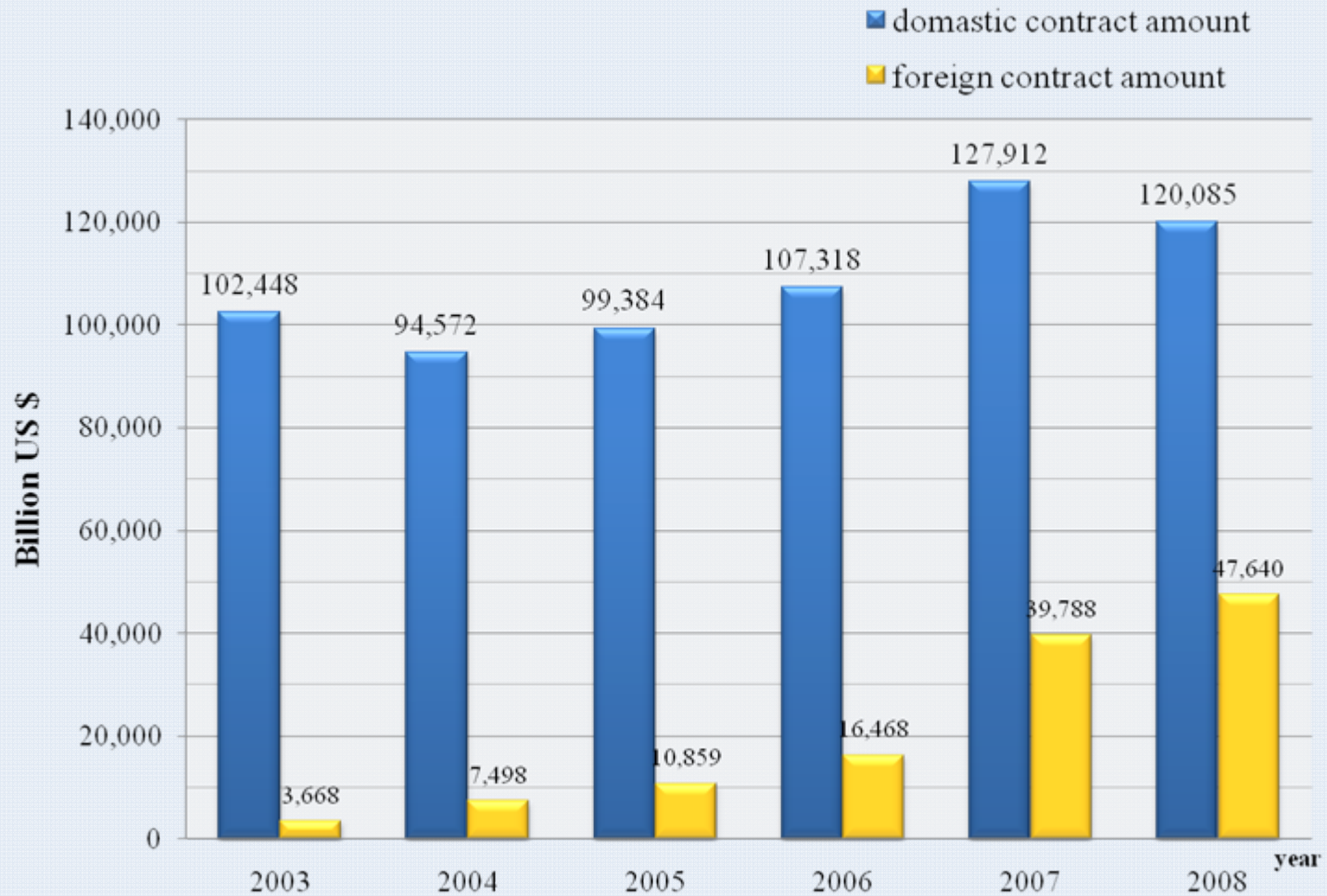
- **GDP-to-Construction Investment Ratio**
- **Contract Amount**

# GDP-to-Construction Investment Ratio

- Construction Investment accounts for 15.9% of GDP



# Contract Amount

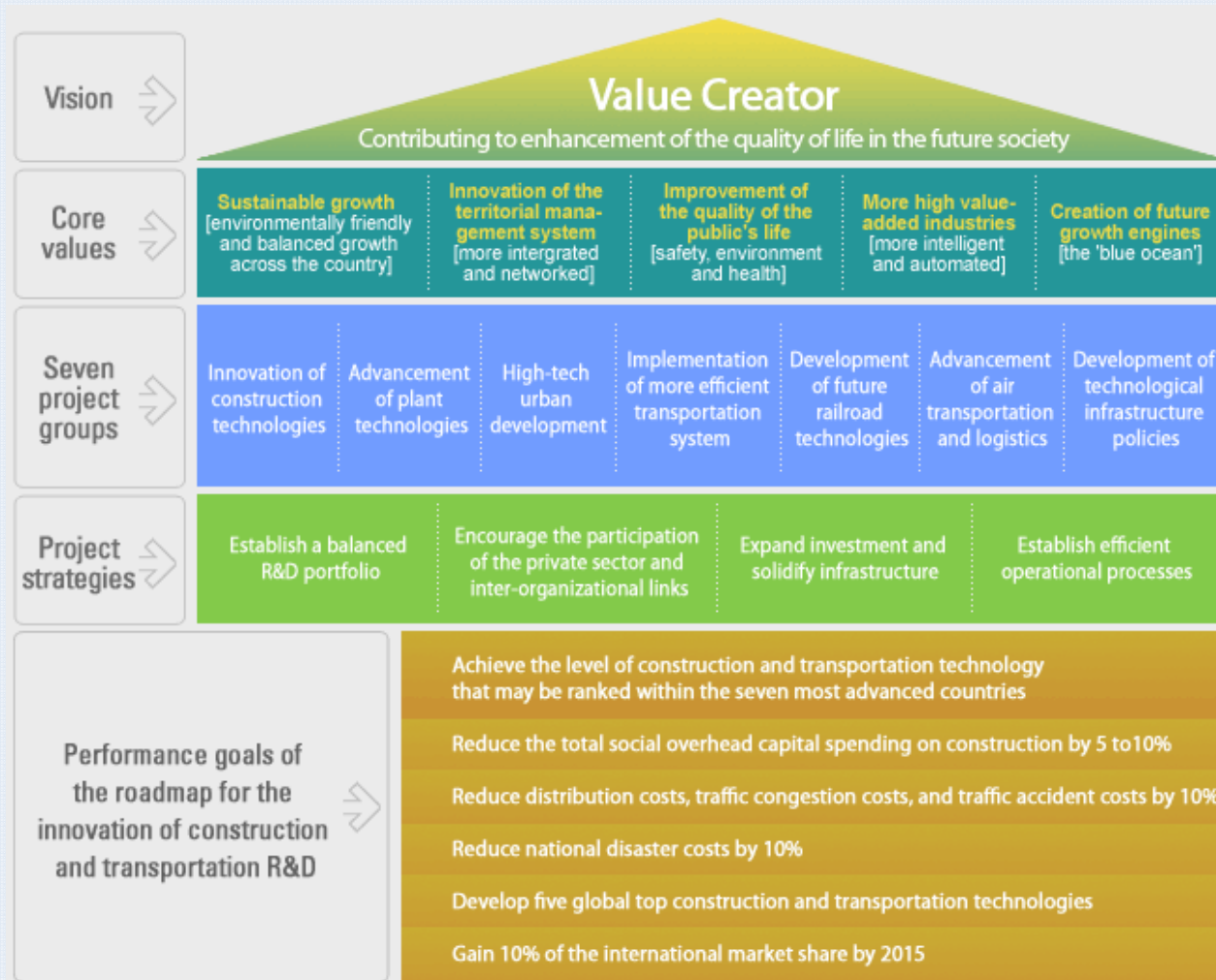


## II. Government Policy on construction

- **MLTM R&D Plan 2009**
- **VC-10 (Value Creator – 10)**
- **R&D projects**

# MLTM R&D Plan 2009

- Vision and Goal



Resource : <http://www.kictep.re.kr>

# MLTM R&D Plan 2009

- Government R&D Budget in Construction and Transportation

(unit : million US dollar)

|                | 2005 | 2006 | 2007 | 2008 | 2009 |
|----------------|------|------|------|------|------|
| Total Budget   | 147  | 256  | 322  | 345  | 450  |
| Construction   | 85   | 124  | 159  | 168  | 310  |
| Transportation | 65   | 132  | 163  | 177  | 140  |

- How to proceed

## Revitalize the R&D project

- Meet the government policy like Green construction, coping with climate change etc.
- Concentrated investment for vc-10 projects

## Promote economy

- Support new projects

Resource :  
<http://www.kictep.re.kr>



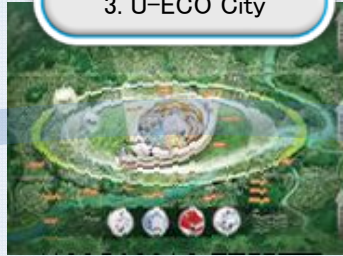
1. Intelligent geographic information management



2. Urban regeneration



3. U-ECO City



4. Urban magnetic levitation trains



5. Future high-speed railroad systems



10. Skyscraper complex building system



9. Extra long-span bridges



8. Aircraft certification technologies



7. Seawater desalination systems



6. Smart highways

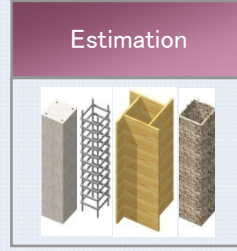
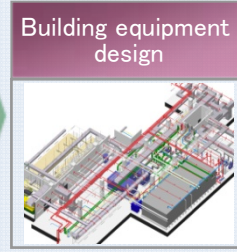
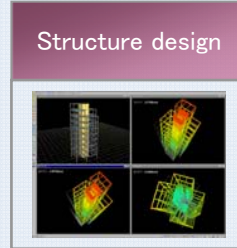
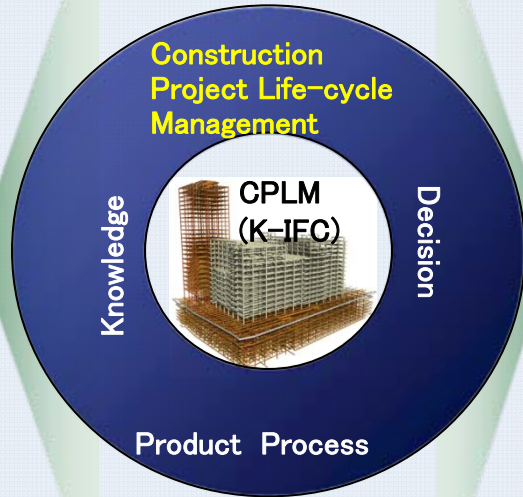
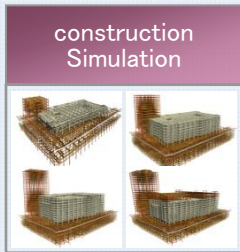


## Value Creator

Resource : <http://www.kictep.re.kr>

# R&D projects

- Virtual Construction system



**Goal**

Develop the Virtual Construction system  
 – create, share and manage the design and engineering information based on 3-dimension between all participant during the construction life-cycle

reduce total construction cost by 3%

reduce term of construction work by 5%

reduce engineering process by 10%

Resource : <http://www.kicttep.re.kr>

# R&D projects

- Skyscraper complex building system

## S/W Technologies

### Design/Engineering



BIM

Mixed-use structure

### Maintenance



Intelligent management

Disaster prevention system

## H/W Technologies

### Material



High impact concrete

Energy reduction exterior covering

### Construction



High-speed construction

Precision construction



## Goal

Technological independence in skyscraper building

develop core technologies

high efficiency material

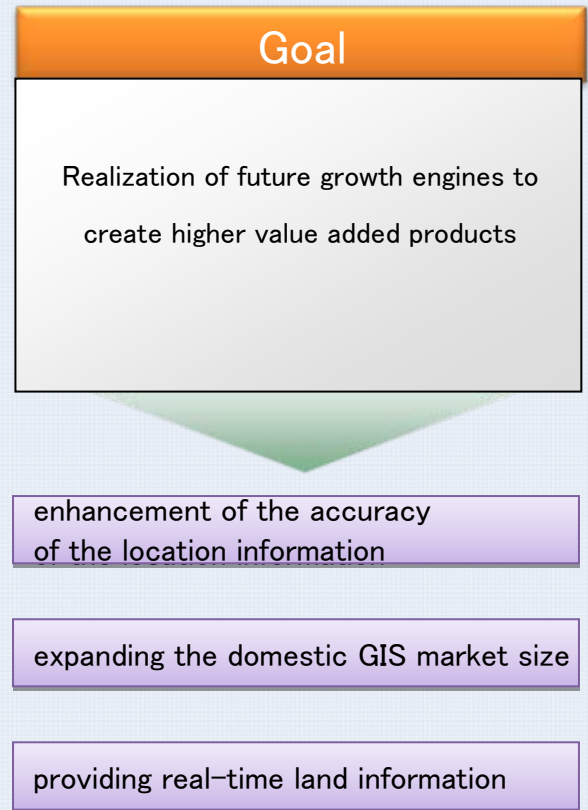
advanced construction method

develop BIM technologies

Resource : <http://www.kictep.re.kr>

# R&D projects

- Land Specialization



Resource : <http://www.kicttp.re.kr>

## Ⅲ. Construction CALS in Korea

- **Operation and Management of the CALS systems**
- **Development and Management of the CALS standards**

# ● Operation and Management of the CALS systems

- **6 CALS systems management for MLTM**
  - Each public corp. operates several CALS system
  - Improvement of system performance
- **System update for new user requirements**
- **Construction management systems reform for high performance**

# ● Development and Management of the CALS standards

- Research for developing of drawing and delivery guide based on the 3 dimensional design information(include BIM)
- Maintenance and dissemination of the Construction CALS standards
  - Development and revision of the CALS standards  
(Standards development, Technical Support, Revision)
  - Repository systems service for the CALS standards
  - Operation of standardization committee