Recent Five-Year-Plan Research Projects of China Related to Construction IT

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Agenda

1. Role of Ministry of Construction
2. The System for Boosting Construction IT
3. Research projects within the Tenth Five-Year Plan
4. Proposed Research Projects for the eleventh Five-Year Plan
5. Conclusion
1 Role of Ministry of Construction

- Urban planning
- Municipal utility industry
- Suburban planning
- Survey and design industry
- Engineering construction
- Real estate industry
- Urban construction
- Construction industry
- Suburban construction
Responsibilities of Ministry of Construction

- Make the related policies
- Make the related standards
- Boost the progress on technology
- Instruct the related work
- Propose professional subjects for higher education
- Supervise the construction market

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Closely related ministries:

- State Development and Reform Commission
- Ministry of Land and Resources
- Ministry of Railways
- Ministry of Communications
- Ministry of Water Resources
- General Administration of Civil Aviation

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2 The System for Boosting Construction IT

Policy aspect

Substantial undertaking aspect
Policy aspect

Ministry of Construction

E.g. in 2001

Ministry of Construction

Issued a document entitled

“The fundamental points for the informatization of construction area”
Substantial undertaking aspect

Five-Year-Plan under Ministry of Science and technology

e.g. tenth: 2001-2005;
eleventh: 2006-2010

Ministry of Construction is supposed to organize the application, undertaking and appraisal of the research projects
3 Research projects during the Tenth Five-Year-Plan

Project 1
The digitization of planning, design, construction and service of cities
Budget: 15 million RMB

Project 2
The key techniques for the informatization of construction industry
Budget: 2 million RMB
Project 1
The digitization of planning, designing, construction and service of cities

1. Standards and specifications for digital city
2. Development strategies for digital city and relative policies
3. Key techniques for the system integration of digital city
4. Comprehensive information system for urban planning
5. Management information system for municipal utilities
6. Management information system for construction market and trading
7. Management information system for residential and real estate property
8. Development of application software for design and construction companies
9. Assessment of application software for construction
10. Pilot projects for digital city
11. Protection and supervision system for tourist area
Major research achievements

Standards and Policies

Techniques and software

Pilot projects
Standard framework

- General stand.
  - Related regul. & stand.
  - General stand. of comp. sys.
  - General stand. of specialty
  - General tech. specification

- Stand. for urban inform.
- Stand. for urban construction
- Stand. for eng. construction & construction industry
- Stand. for residence and real estate
- Stand. for others
Example standards

1. Urban municipal supervision and management information system (rules for basic management grid and coding)
2. Urban municipal supervision and management information system (classification and coding for urban management components and events)
3. Urban municipal supervision and management information system (Geocoding)
4. Technical code for urban municipal supervision and management information system
Large terrain scene (texture data 1G)
GIS 3D engineering geology
Information management system for urban planning
Integrated management system for urban underground pipelines
Information system for tourist areas
Information system for monitoring the construction market

![Image of the information system interface](image.png)

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project Location</th>
<th>Company Name</th>
<th>Company Type</th>
<th>Contact Person</th>
<th>Phone Number</th>
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<td>Project 1</td>
<td>Location 1</td>
<td>Company 1</td>
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<td>John Doe</td>
<td>123-456-7890</td>
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<td>Project 2</td>
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<td>Jane Smith</td>
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<tr>
<td>Project 3</td>
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<td>Company 3</td>
<td>Office</td>
<td>Michael Brown</td>
<td>135-790-2468</td>
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</tbody>
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This system allows tracking and monitoring of various projects, ensuring efficient oversight and compliance in the construction market.
Information system for construction companies
Different category of pilot projects

Total: 73
Project 2
The key techniques for the informatization of construction industry

1. Development strategies on the construction informatization
2. System for design and construction management based on IFC
3. Integrated supply chain of construction industry under electronic commerce
4. Network-based collaborative platform for building construction projects
5. Pilot projects on the informatization of construction industry
4 Proposed Research Projects for the Eleventh Five-Year Plan

Project 1
The key techniques and application for the informatization of construction industry

Project 2
The collaborative service for the digitized community
Project 1
The key techniques and application for the informatization of construction industry

1. Building information model for design and construction management
2. Key techniques and application of informatization for survey and design companies
3. Key techniques and application of computer-aided construction
4. Key techniques and application of informatization for construction companies
Project 2
The collaborative service for the digitized community

1. Standards and specifications for the collaborative service for the digitized community
2. Platform for the management and service of the digitized community
3. Key techniques for utilizing mobile computer based on management-grid for digitized community
4. Connection with the supporting system of modern service sector
5. Case studies on 20 digitized communities for the collaborative service
5 Conclusion

Recent Five-Year-Plan research projects in China is introduced.
Listen to your opinions and absorb better ideas.
Thank you for your attention