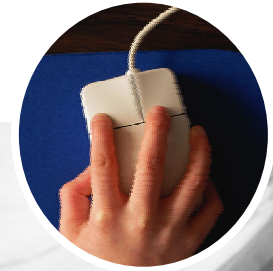


THE R & D OF CONSTRUCTION PROJECT QUALITY & SAFETY SUPERVISION MANAGEMENT INFORMATION SYSTEM

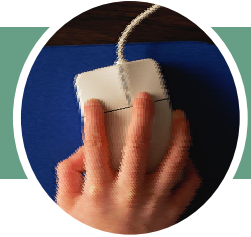


**Introduction about the “11th Five-Year Plan”
National Science and Technology supporting plan**

YUAN QING HUA

**Guangdong provincial general station for supervision & Testing of Quality &
Safety of Construction Engineering**

Contents



Preface



Brief introduction



**The significance of system
development and foundation**

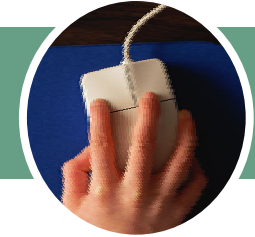


**National “11th Five-Year Plan”
subject research**



Summary

Preface



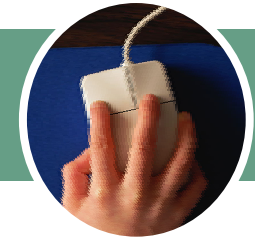
Today I will mainly introduce our task of the National supporting plan's sub-subject **“City Construction Project Quality & Safety Supervision Management Information System Research .”**

The content has four parts:

- ❖ The Chinese Construction Project Quality And Safety supervision Management mode
- ❖ The Significance Of System Development And Foundation
- ❖ The“ 11th Five-Year Plan National Subject Research”
- ❖ Summary



Brief introduction



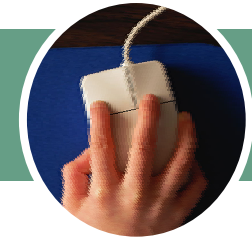
Chinese construction project quality & safety supervision management mode

1.1 Quality & safety supervision management department and structure

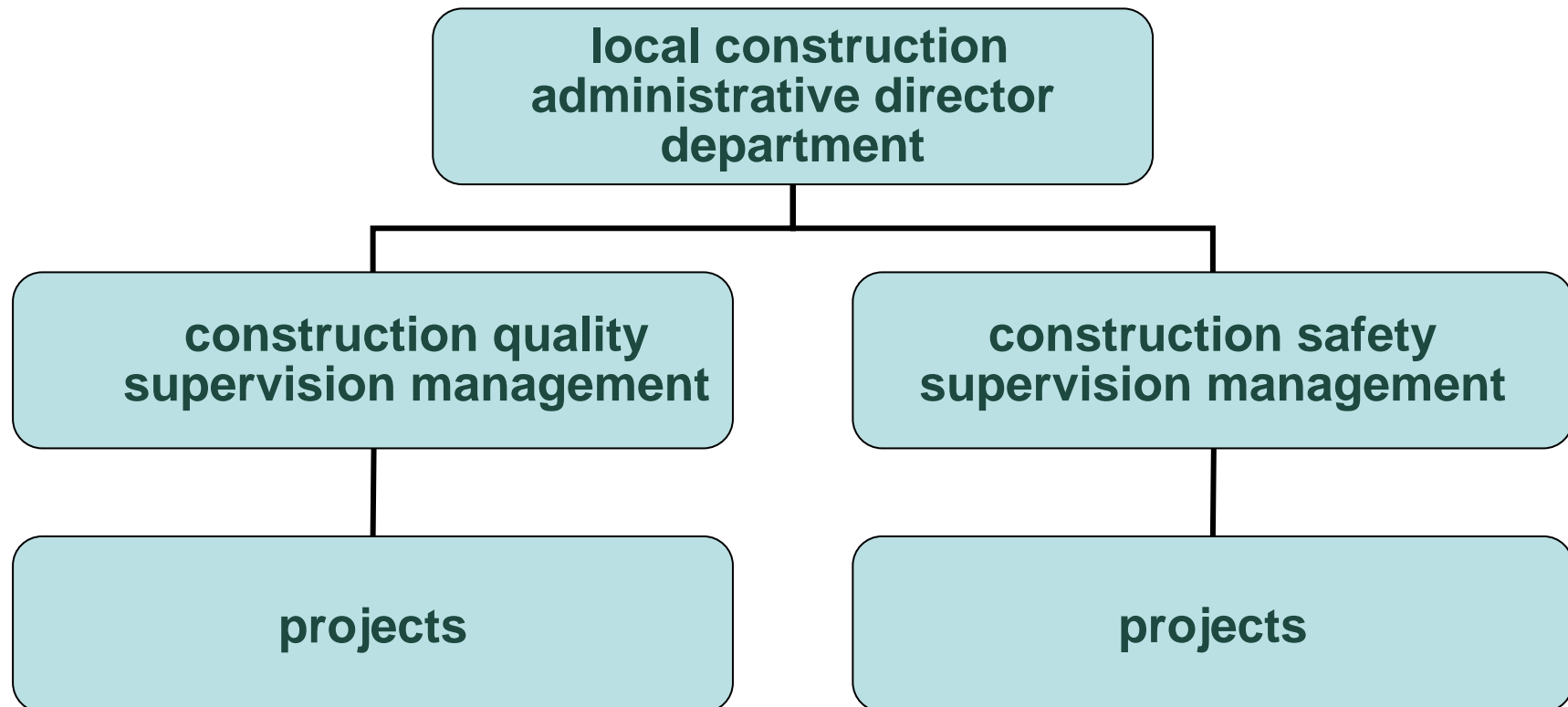
- All the local construction administrative department, e.g. provincial construction department, city construction bureau, county construction bureau, and so on, have the responsibility for construction quality & safety supervision management



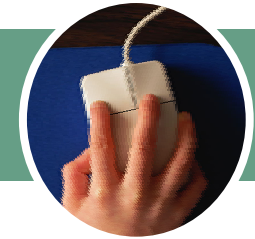
Brief introduction



- Each administration bureau has quality & safety sub-departments, combined as one in some region, they have the responsibility for specific project supervision management



Brief introduction



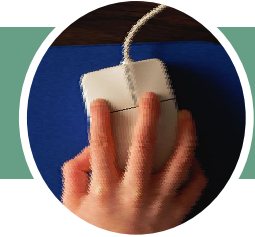
1.2 Quality & safety department's supervision kernel

**Quality & safety department's supervision kernel
mainly has two parts:**

- Behavior supervision
- Entity supervision



Brief introduction

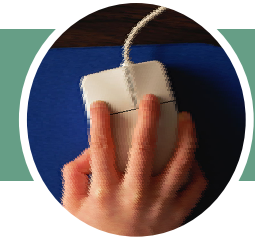


----Behavior supervision

According to our country related laws and rules, the supervision departments supervise on the entities, who have the responsibility of carrying out quality & safety production and obligation



Brief introduction

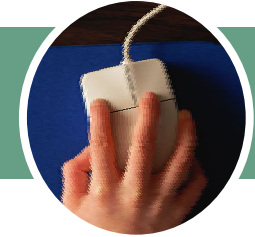


----Entity supervision

By checks and important part supervision during the construction process , the supervision departments supervise on the behavior.



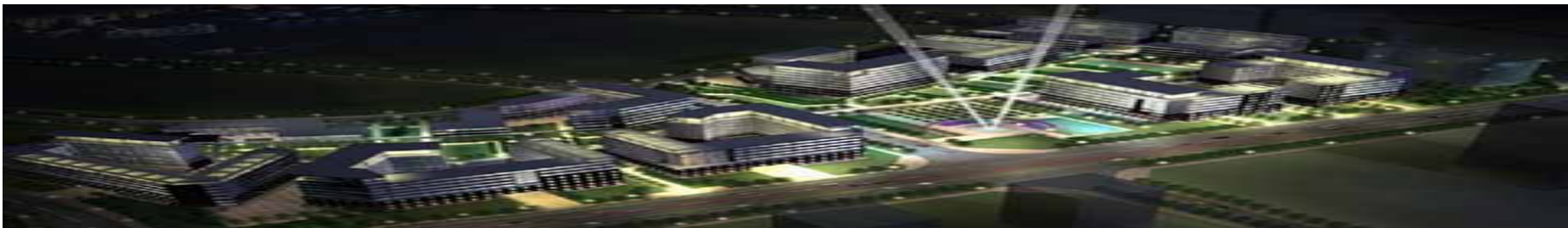
The significance of system development and foundation



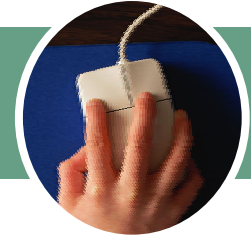
2.1 Purpose of system development

2.1.1 Changing the government's supervision mode

- Improving the government's supervision and service level
- Setting up digital supervision system by data collecting , processing and dispatching so that government can be improved from rough management to exact management



The significance of system development and foundation



2.1.2 Data share realization , society resource optimization reconfiguration



With the system's help, the government can share its information with project participators, can lighten rate of work of government supervisor, reduce supervision data repetition, make project under fully and dynamic control, improve project quality & safety, and save costs.

The significance of system development and foundation

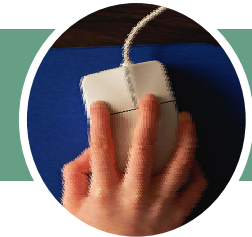


2.1.3 Standardization of project supervision, improvement of information application level



The system development bases on profession data standard research, by this way the system establishes the construction project quality & safety supervision data standard, and collects data from the project's beginning to the end, standardizes the supervision behavior, achieves project information supervision goal.

The significance of system development and foundation



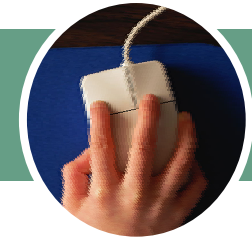
2.2 Related foundation

2.2.1 Government policy support

In recent years, State Department and Ministry of Construction issue

- *Construction Project Quality Management Regulations*
- *Construction Project Safety Production Management Regulations*
- *Construction Project Quality Supervision Guide*
- *Construction Project Safety Production Supervision Management Regulations*

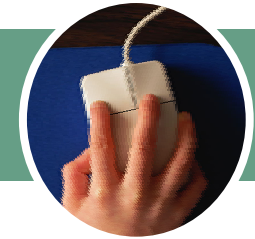
The significance of system development and foundation



- **All of above require local department to enhance the supervision management and provide foundation for supervision system development and implement.**



The significance of system development and foundation

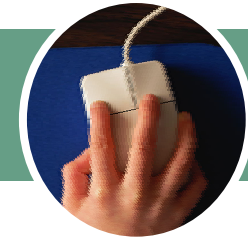


2.2.2 Technology foundation



Early in 2002, Guangdong provincial general station for supervision & Testing of quality & safety of Construction Engineering had invited Guangzhou Huaruan company , Guangzhou 3H company , and so on to take part in the research together, applied in many cities of Guangdong province, and established construction project quality & safety information supervision network system.

National "11th Five-Year Plan" subject research



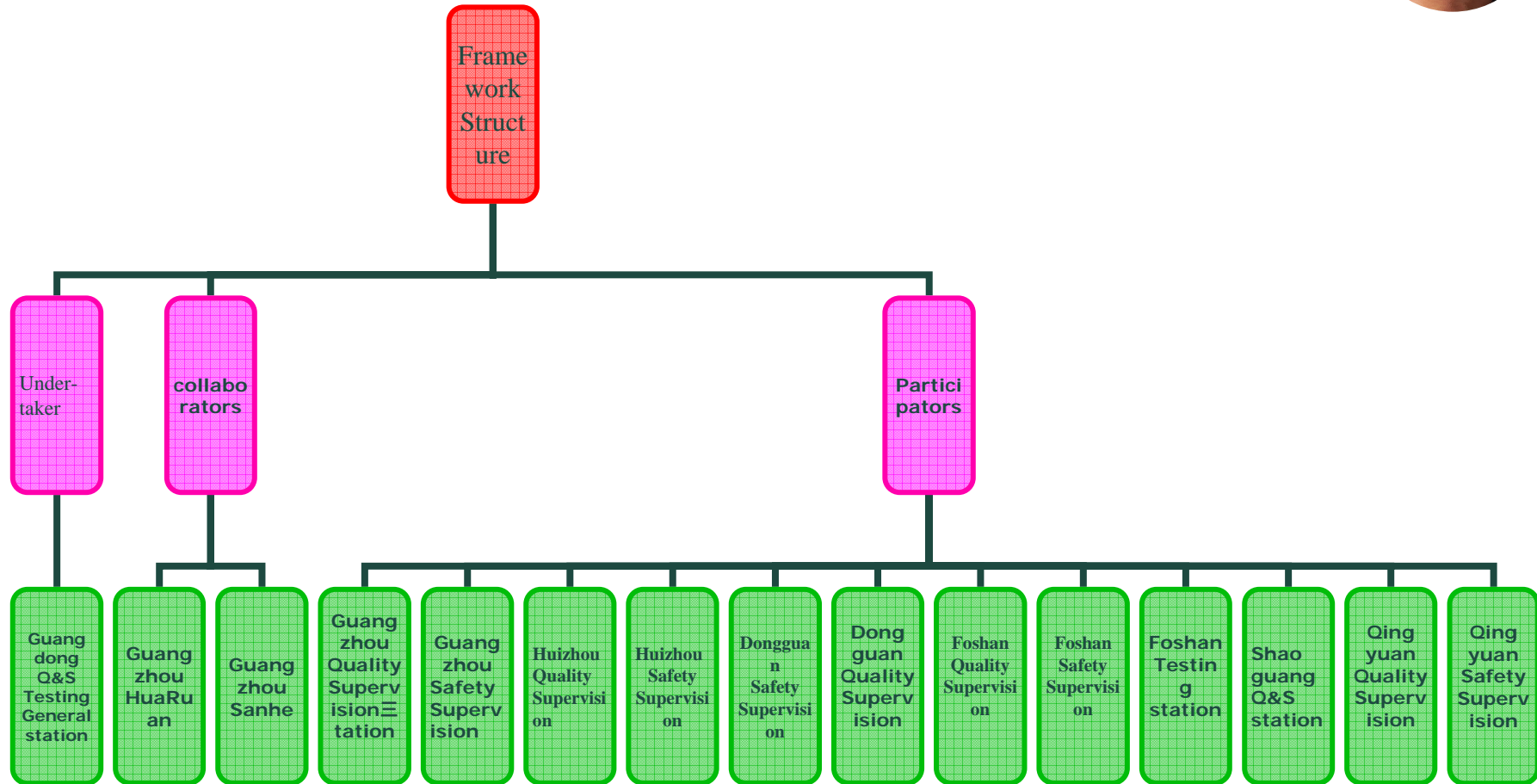
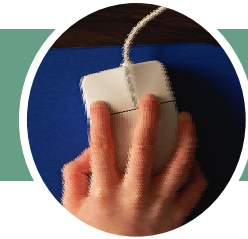
3.1 Subject and participators

- ❖ The national "11th Five-Year Plan" Science and Technology supporting plan---

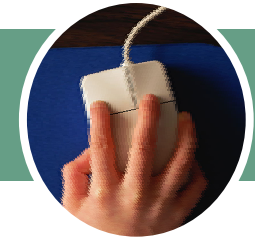
"The city construction project quality & safety supervision management information system research" is the sub-subject of "The key technology research and demonstration about city construction project digital supervision"

- ❖ Carried out by Guangdong provincial general station for supervision & Testing of quality & safety of Construction Engineering, Guangzhou Huaruan company , Guangzhou 3H company, and other 10 local supervision and testing organizations. Their relationship is as below:

National "11th Five-Year Plan" subject research



National "11th Five-Year Plan "subject research

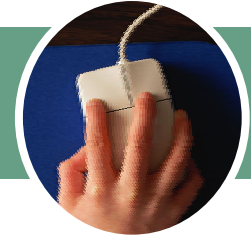


3.2 Technology route

This sub-subject uses such technology route which **begins from “basic research” to “standardization” , finally back to “applications ”**



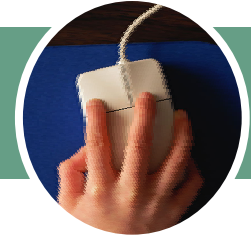
National "11th Five-Year Plan" subject research



3.3 Main research work

- Establishing city construction project quality total evaluation model, enhances construction project supervision ways and science base
- Setting up “ ***City Construction Project quality testing data standard***” and “ ***City Construction Project quality & safety supervision data standard*** ”

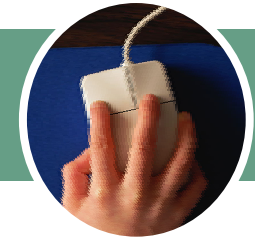
National "11th Five-Year Plan "subject research



- Developing city construction quality & safety supervision management information system
- Developing city construction quality testing management information system
- Applying these systems as a model to daily work in Guangdong Province construction project quality & safety supervision management

Now I will give the introduction about the above points.

National "11th Five-Year Plan "subject research

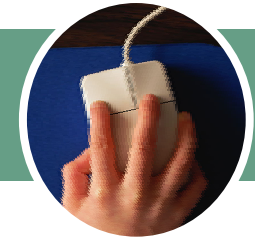


3.3.1 The research of city construction project quality general evaluation model

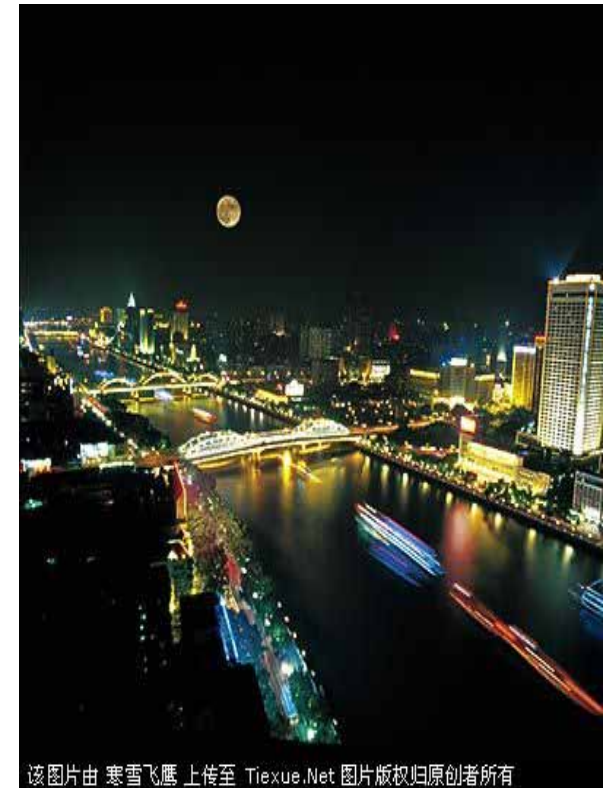
- ❖ This research work is to make a regional integrated evaluation according to difference construction project evaluation levels, and to divide the model into 3 level index.



National "11th Five-Year Plan "subject research

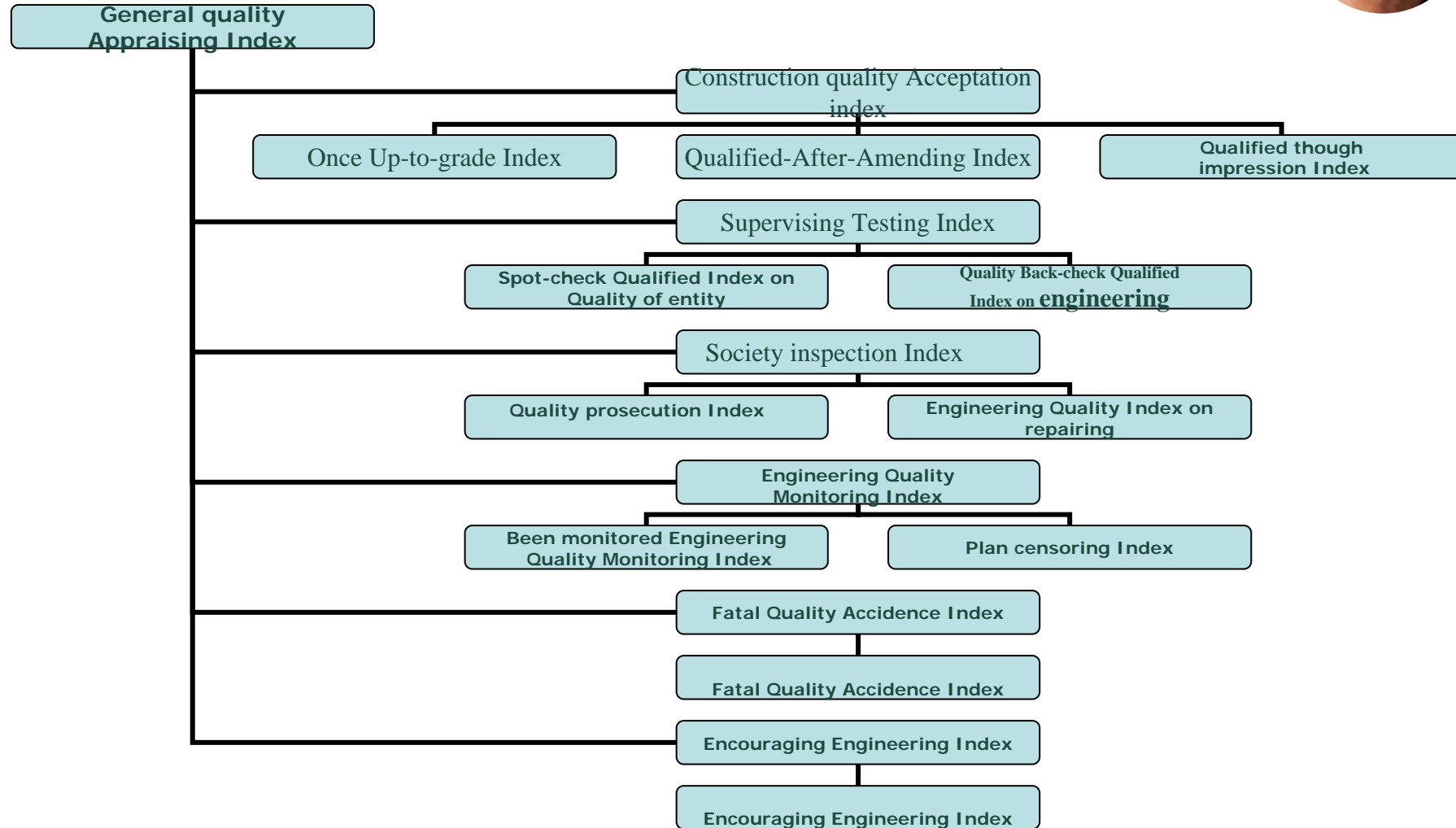
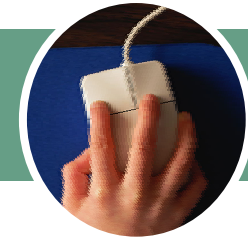


- ❖ Every index bases on difference inspected domain, and statistics conception, and is added difference inspected points weighted index. By using all these indexes the final evaluation is made.

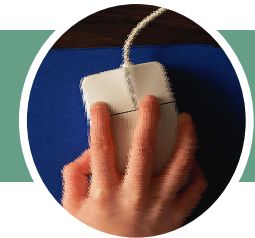


3 level model structure as below:

National "11th Five-Year Plan "subject research



National "11th Five-Year Plan "subject research

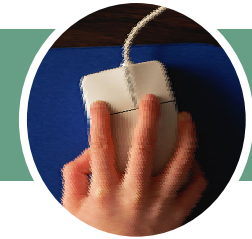


---With the lower level's data reintroducing, and using mathematical model method, the higher level regional general data is formed. The general integrated evaluation base on the three-dimensional level of county , city and province quality evaluation. All these provide base to the higher level supervision department.



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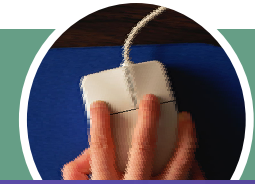
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----City contraction project quality total integrated evaluation model is pyramid structure, shown below:

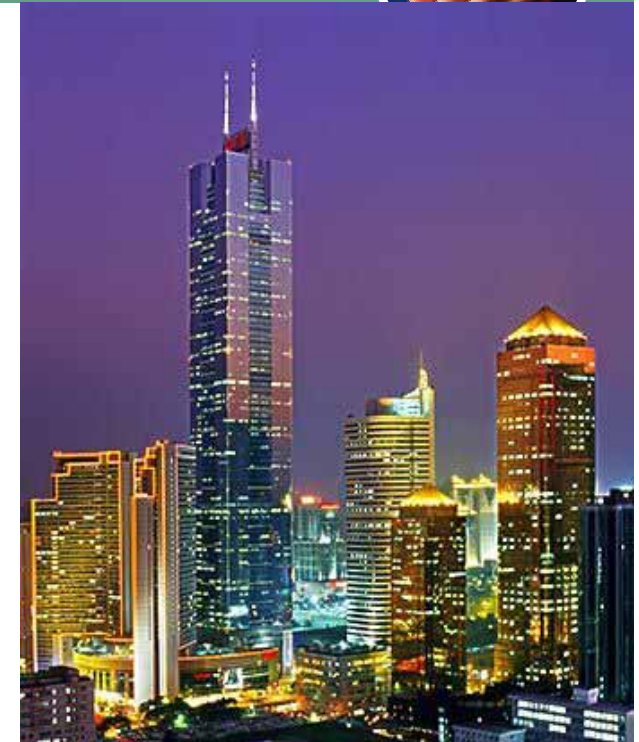


National "11th Five-Year Plan" subject research

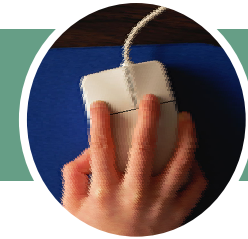


3.3.2 Data standard research

Setting up ***“City Construction Project Quality testing data standard”*** and ***“City Construction Project Quality & safety supervision data standard”***, unifying data definition, category and coding, solving no uniform data problem. So far, the second edition has been finished.



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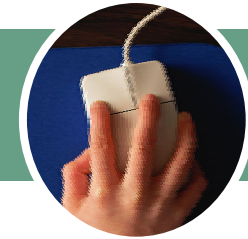
3.3.3 City construction project quality & safety supervision management information system research

Main functions :

- ❖ project supervision information database
- ❖ project total quality evaluation model
- ❖ quality & safety supervision process management
- ❖ project completion data recording management



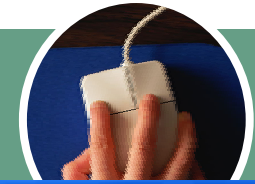
National "11th Five-Year Plan" subject research



- ❖ project remote video supervision management
- ❖ project safe production dynamic management
- ❖ supervision organization daily work management
- ❖ GIS service
- ❖ note service
- ❖ supervision organization website and data exchange

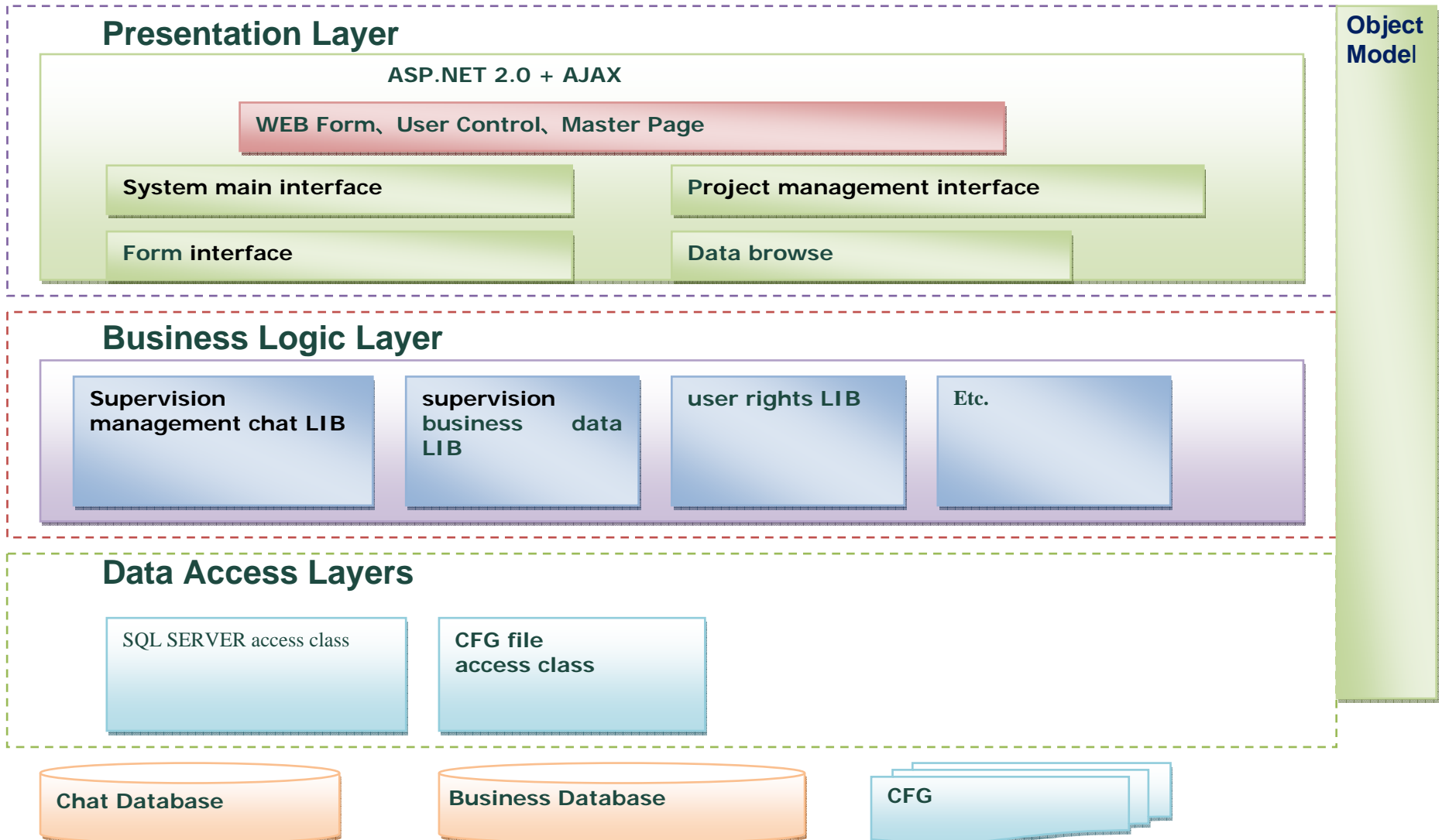
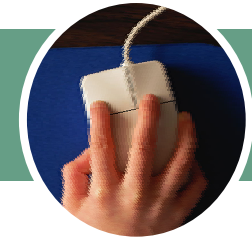
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1	2007-0888	2007-2426	汇桥集团一期E区	危险10	2007-09-07	一级	施工中	无控制	危险源类别22
2	2007-2426	2007-2426	汇桥集团一期E区	危险10	2007-09-10	一级	施工中	无控制	危险源类别23
3	2007-2426	2007-2426	汇桥集团一期E区	危险11	2007-09-14	二级	施工中	无控制	危险源类别16
4	2007-2426	2007-2426	汇桥集团一期E区	危险17	2007-09-18	一级	施工中	无控制	危险源类别24
5	2007-2426	2007-2426	汇桥集团一期E区	危险18	2007-09-18	一级	施工中	无控制	危险源类别33
6	2007-2502	2007-2426	汇桥集团一期E区	危险19	2007-09-16	一级	施工中	无控制	危险源类别11
7	2007-2426	2007-2426	汇桥集团一期E区	危险19	2007-09-18	一级	施工中	无控制	危险源类别21
8	2007-2426	2007-2426	汇桥集团一期E区	危险19	2007-09-21	二级	施工中	无控制	危险源类别12
9	2007-2502	2007-2502	汇桥集团一期E区	危险12	2007-09-24	二级	施工中	无控制	危险源类别18
10	2007-2426	2007-2426	汇桥集团一期E区	危险14	2007-09-05	二级	施工中	无控制	危险源类别14
11	2007-0887	2007-0887	汇桥集团一期E区	危险11	2007-09-12	一级	施工中	无控制	危险源类别11
12	2007-2426	2007-2426	汇桥集团一期E区	危险18	2007-09-15	一级	施工中	无控制	危险源类别12
13	2007-2426	2007-2426	汇桥集团一期E区	危险12	2007-09-15	一级	施工中	无控制	危险源类别18
14	2007-2426	2007-2426	汇桥集团一期E区	危险12	2007-09-17	二级	施工中	无控制	危险源类别12

National "11th Five-Year Plan" subject research

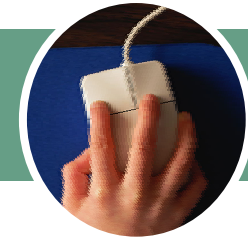


- **System's frame** The information system bases on B/S structure, and adopts popular multi-layer design, bottle up are: data access layer, business logical layer, presentation layer.

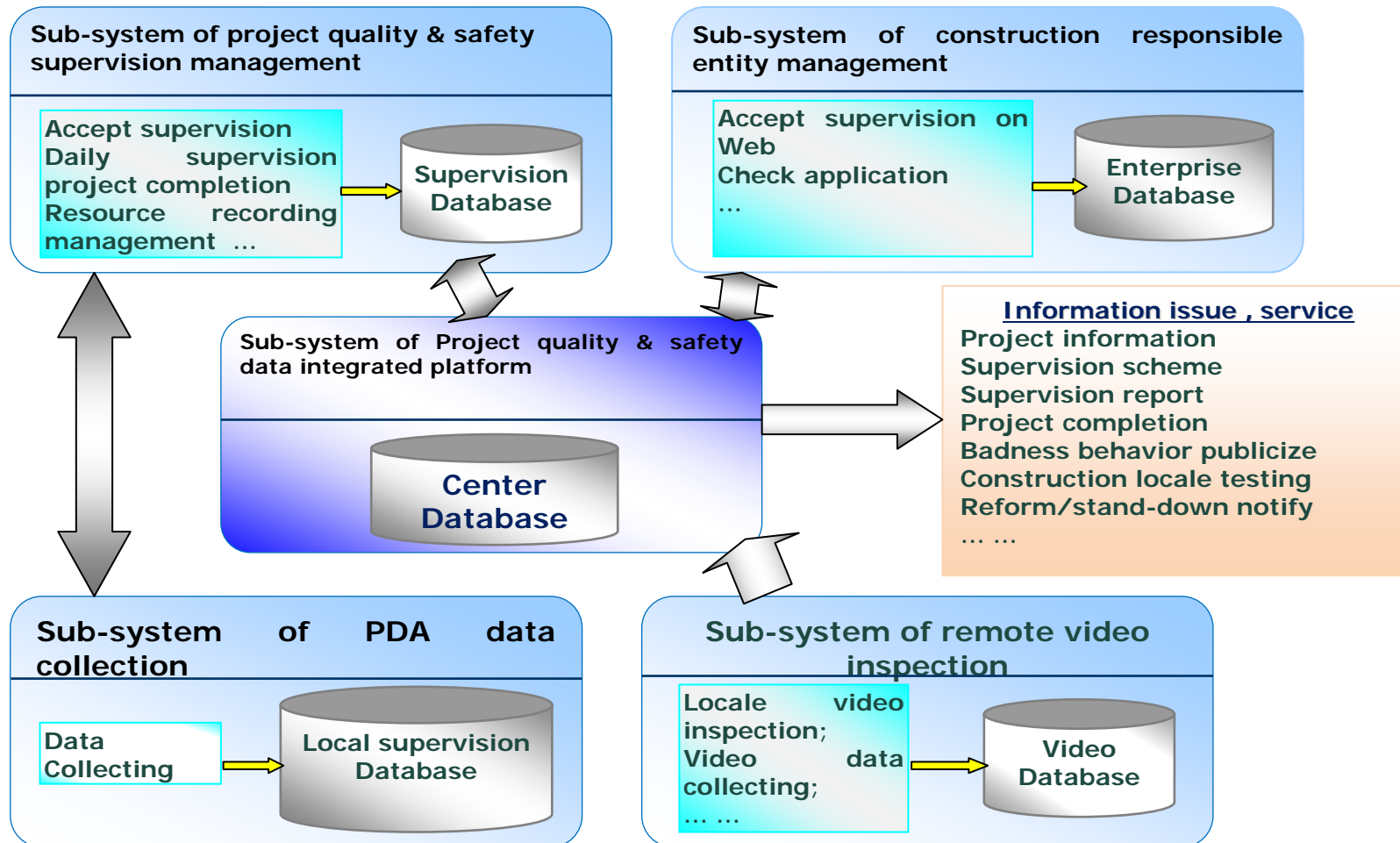
National "11th Five-Year Plan" subject research



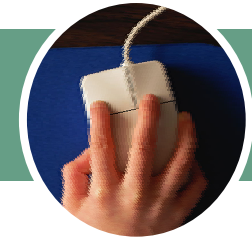
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- System main functions. Main function illustration below



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3.3.4 System of city construction project quality testing

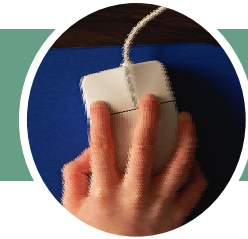
Description of functions:

Acceptation : accept and identify testing sample, register its information into system, and print sample label.

Testing: finish data collecting by entering directly or auto collection; after data entering, system will compute and



National "11th Five-Year Plan" subject research

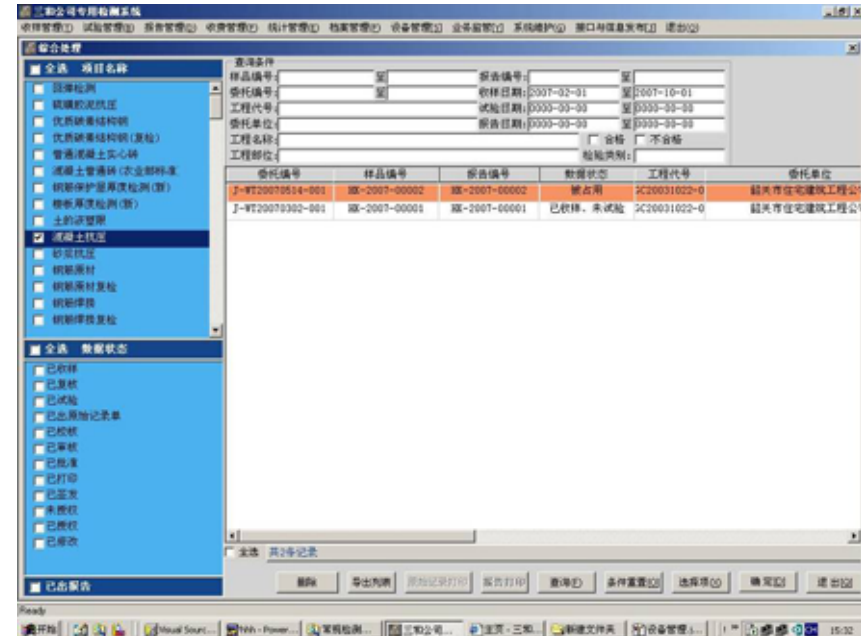


Reporting: after the result audited, system can print out the result, and finally dispatched.

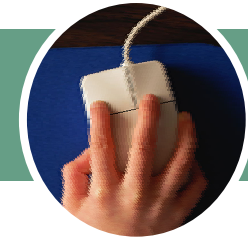
Charging: according to the charge standard, system count the sum, and print notes

Equipment management: before testing, system will authenticate related equipments whether expired or not.

Quality management: with this function, managers can take a view of all the testing result, and know about which one is problematic, which one is not.



National "11th Five-Year Plan "subject research



Information management: this section includes many basic system-running parameters

Interface and dispatch: with this section, the other applications or equipments can interact with this system.

Testing data exchange: By using the data exchange platform (based on internet), all the supervision departments can share their information about all projects.

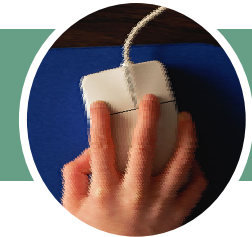
数据接收配置

添加配置

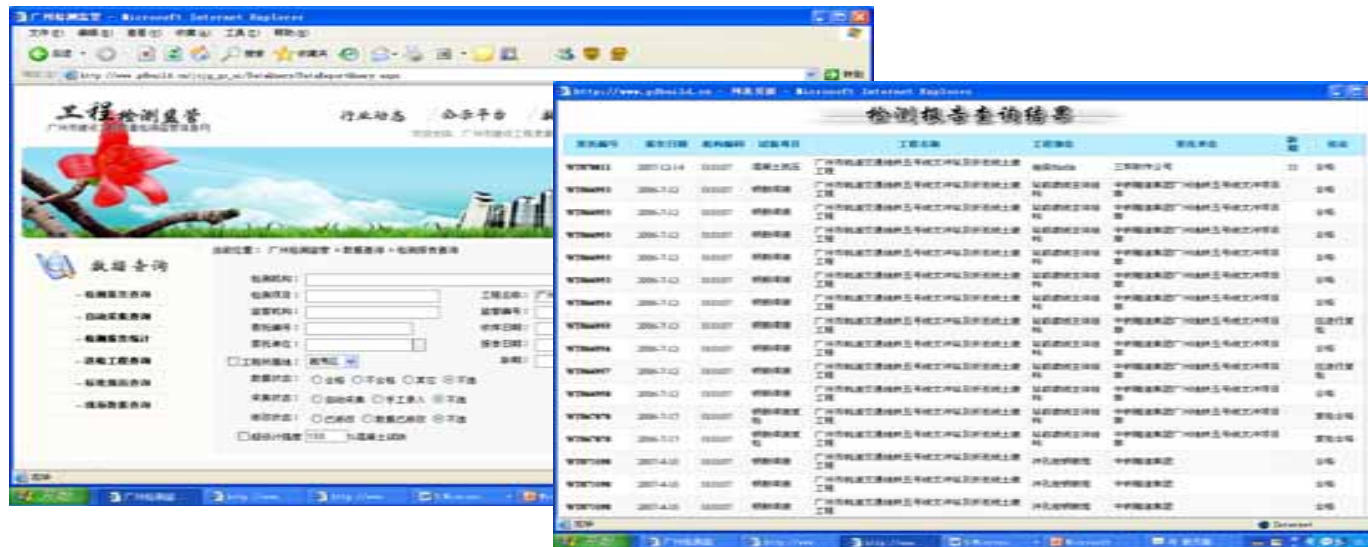
序号	待配置站点	被接收站点	被接收数据类型	修改	删除
1	广州市站	000000000000000000000004	000000000000000000000000	修改	删除
2	穗监站	000000000000000000000000	000000000000000000000004	修改	删除

导出&打印 返回

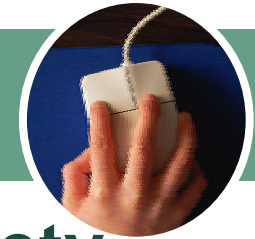
National "11th Five-Year Plan" subject research



Testing data integrated management platform :
gathers the local region testing data, and realizes the city construction project supervision and macro-control, and can make supervision on project quality testing market.



National "11th Five-Year Plan" subject research

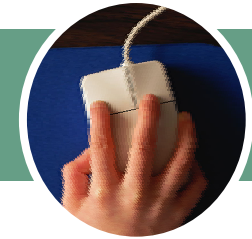


3.3.5 City construction project quality & safety digital supervision system demonstration projects

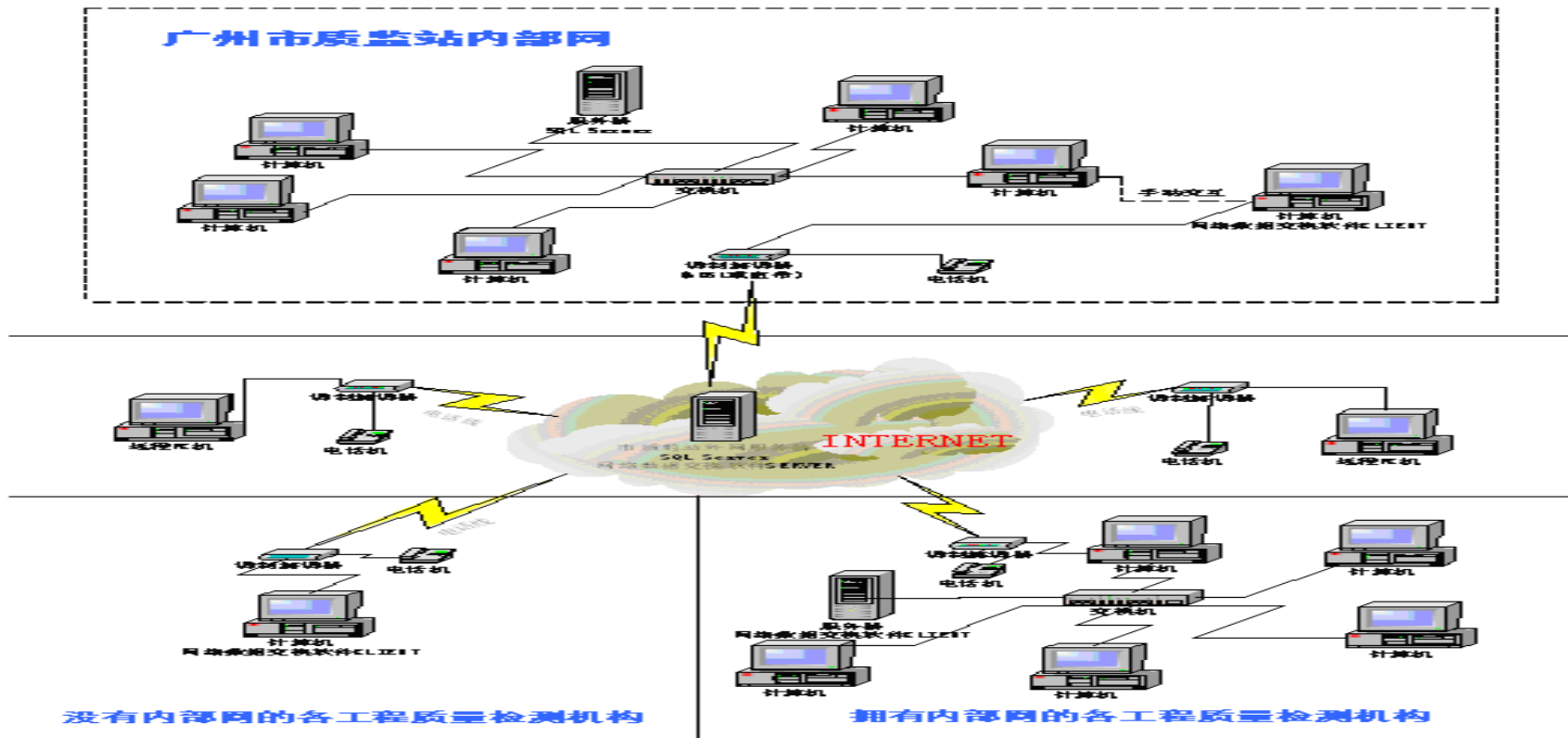


According to the "11th Five-Year Plan" National Science and Technology supporting plan, so far, we have set up demonstration application model base in Guangzhou, Qingyuan, Shaoguan and Chaozhou of Guangdong Province, which have made active influence, and gained society and economy benefit.

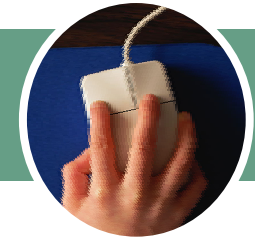
Summary



All in all, construction supervision management digitizing and networking is the trend of our nation's construction industry development.



Summary



According to requirement of “11th Five-Year Plan” National Science and Technology supporting plan, researching and applying“ **Construction Project Quality & Safety Supervision Management Information System**” can help make project supervision work more efficient, networking , standardization and improve government’s management level, saving costs. All these have wide industrialization foreground, social and economic benefits.





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