

# GIS-based Fire Safety Management System & Overall Fire Safety Management System



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FireVisual

# 1 Necessity



## Simple Information

The GIS and Drawing is too Simple to manage the information:  
 Fire Inspection  
 Fire Suppression  
 Fire Evacuation  
 Fire Drill



## Low-Efficient

Three-ring binders  
 Cards.  
 Easy to fake and difficult to track, census and evaluate



## Unclear Responsibility

Responsibility chain unclear

AHJ  $\neq$  God

No fire safety big data for decision



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## 2 GIS contents

- 2.1. for inspection mainly
  - Campus, Building





## 2 GIS contents

- Floor

Campus: Xingqing Campus  
 Address or area: Teaching Building No.2  
 Floor: 1F  
 Adding facility

Facility lists	Operation
Smoke Sensor54	Edit Delet.
Smoke Sensor55	Edit Delet.
Smoke Sensor56	Edit Delet.
Smoke Sensor57	Edit Delet.
Smoke Sensor58	Edit Delet.
Smoke Sensor59	Edit Delet.
Smoke Sensor60	Edit Delet.
Smoke Sensor61	Edit Delet.



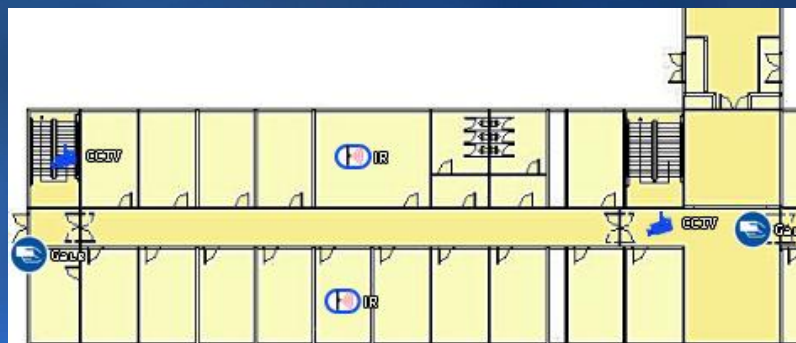
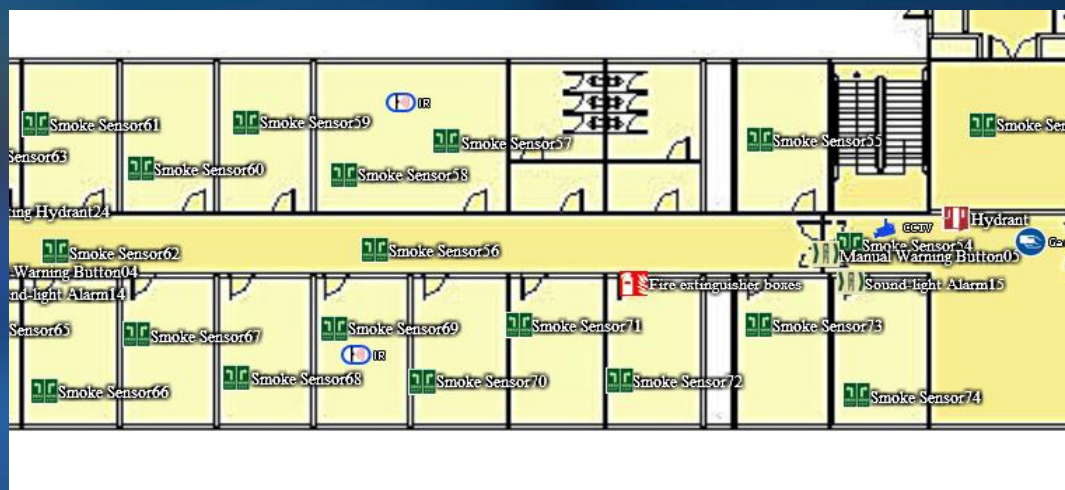
- Inspection point

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- A zone of inspection, includes all facilities need to be inspected in the zone.

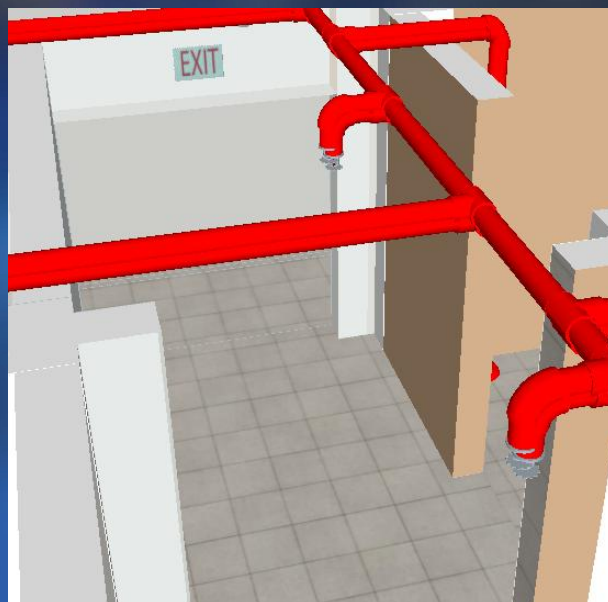
## 2 GIS contents

- Facilities
  - Fire Safety
  - CCTV
  - IR
  - Door Access Control

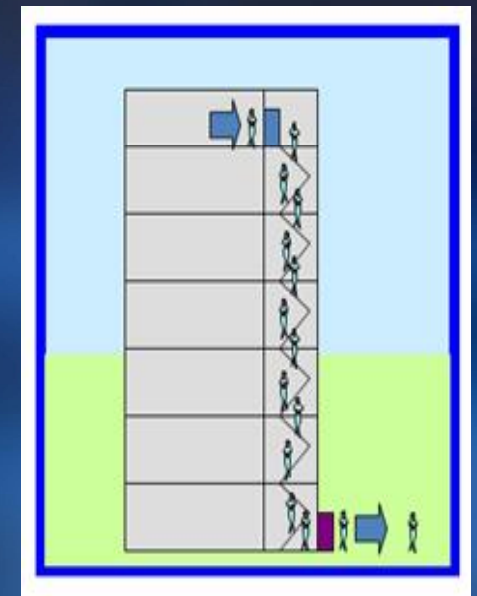
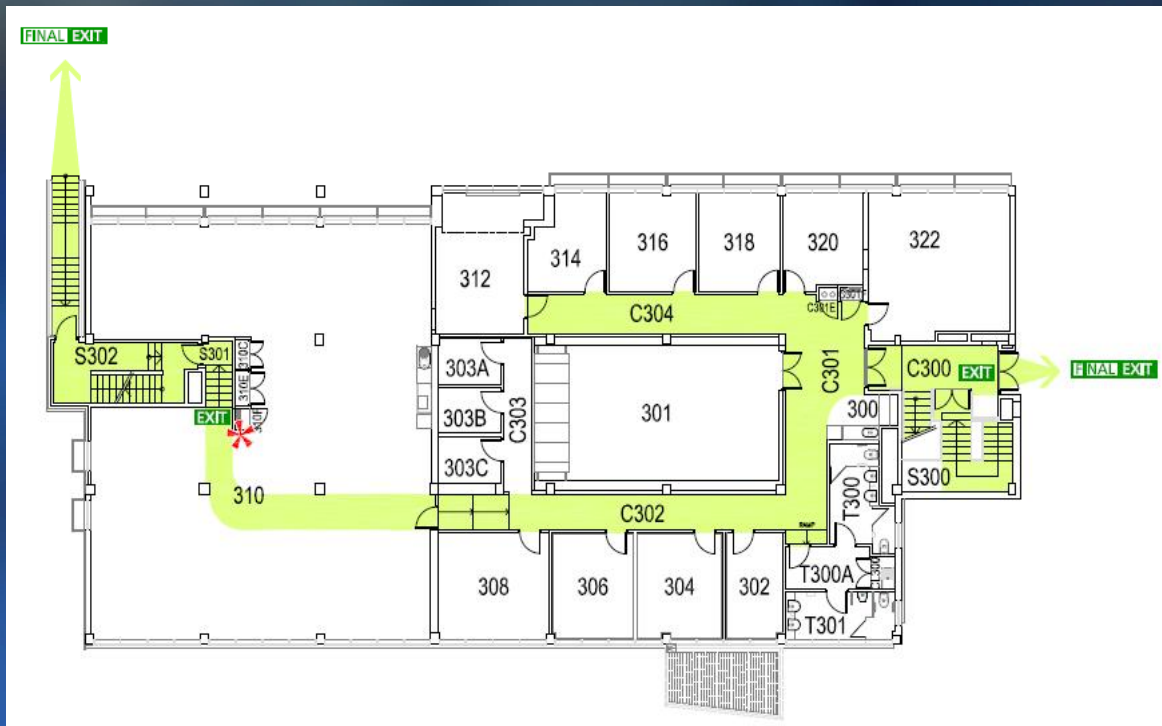


## 2 GIS contents

- 2.2 for evacuation
  - exit



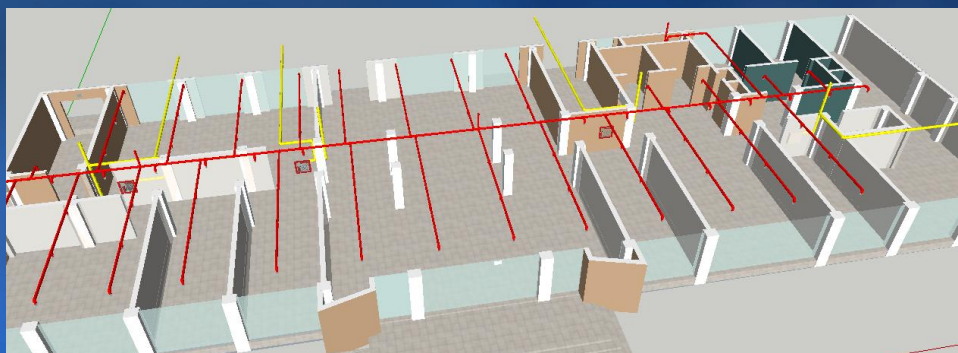
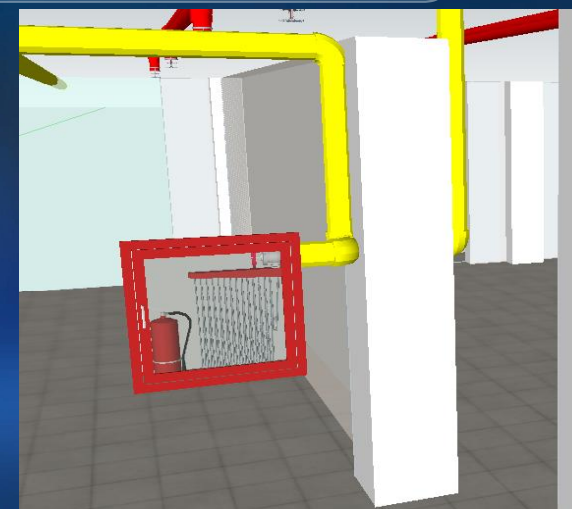
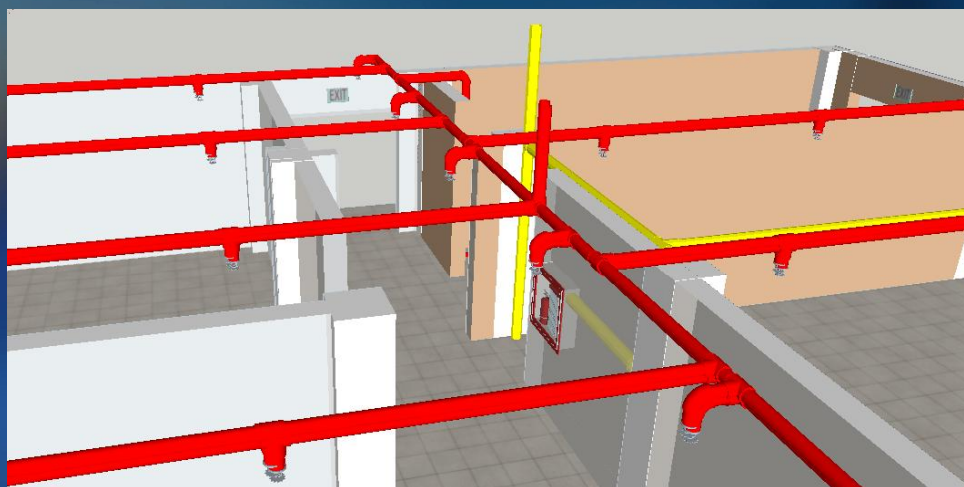
- exit access





## 2 GIS contents

- 2.3 3d



## 2 GIS contents

- 2.4 Fire control
  - Water pipe
  - Pump Position





## 3 Overall Management

- 3.1 Person management

- Operator on duty



- Inspection

- Facilities check items(NFPA 10,25,etc)
- Plan
- Record any corrections/updates
- Maintenance
- Repair/Renewal

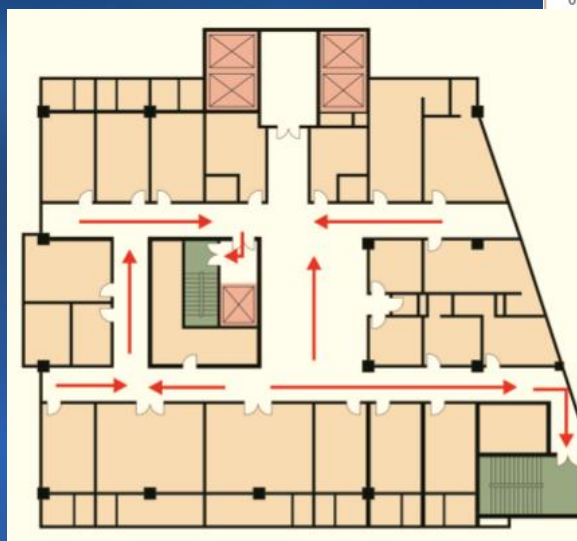
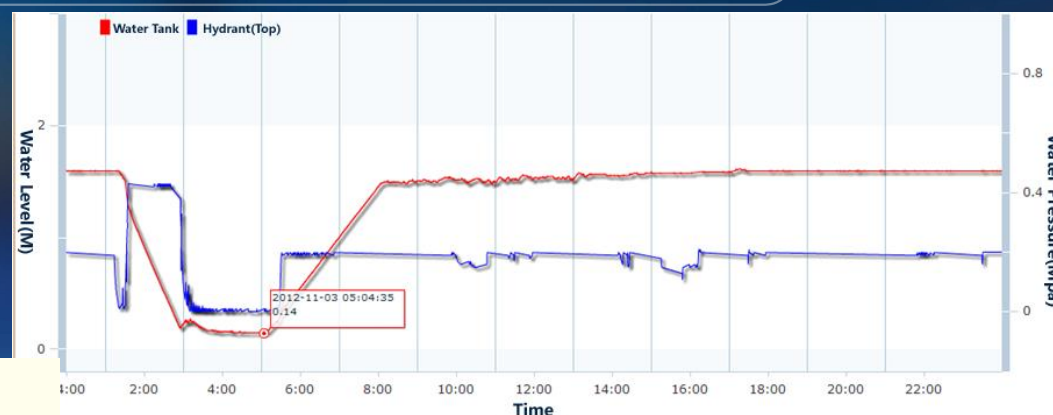


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## 3 Overall Management

- fire suppression
  - Facilities status
    - Water Pressure
    - Tank Water Level
    - Extinguisher status
- Evacuation
  - Plan
  - Exit Route
  - Drill





## 3 Overall Management

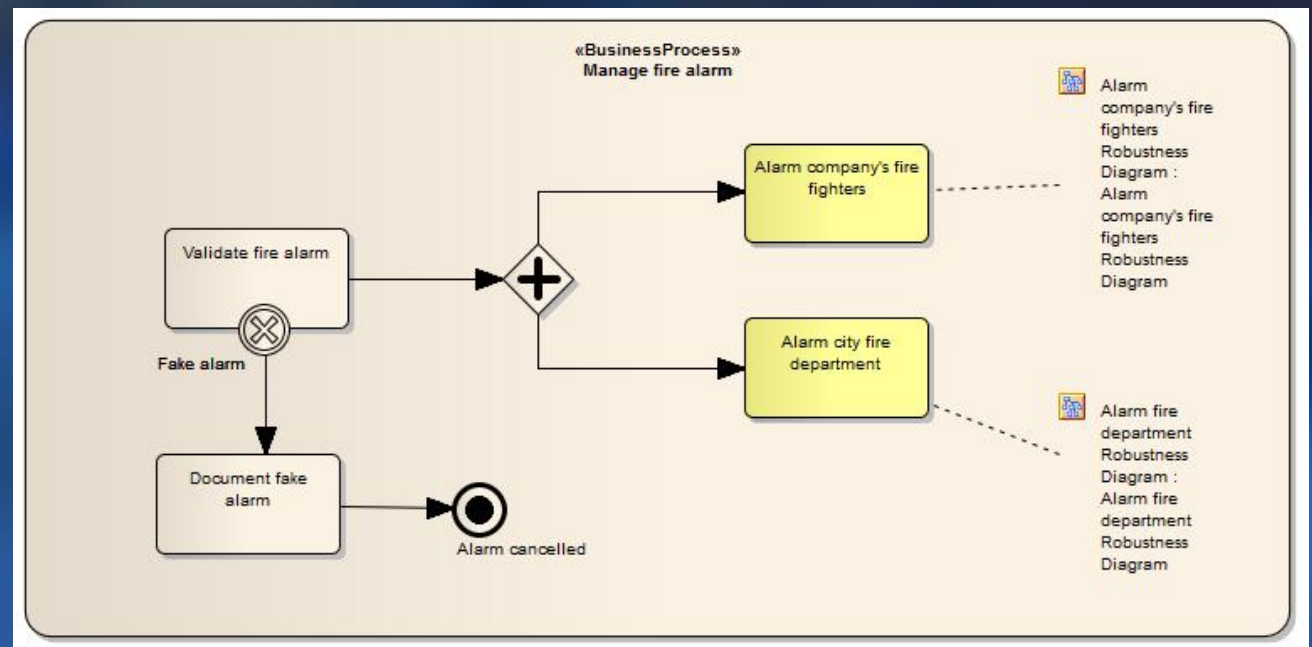
- 3.2 Facilities management
  - GIS-based management
  - Facilities statistics and search
  - Facilities reminder upon expiry

Address	Floor	Equipment code	Check points	Category	Type	DeviceName	Responsible v	Due date	Overdue da
Teaching Buil	2F	11-011-000027996	Check Point 2-1	Extinguisher	Dry powder fir	Dry Powder Fi		2015-07-25	-570day
Teaching Buil	2F	11-011-000027997	Check Point 2-1	Extinguisher	Dry powder fir	Dry Powder Fi		2015-07-25	-570day
Teaching Buil	2F	11-011-000028004	Check Point 2-2	Extinguisher	Dry powder fir	Dry Powder Fi		2015-07-25	-570day
Teaching Buil	2F	11-011-000028005	Check Point 2-2	Extinguisher	Dry powder fir	Dry Powder Fi		2015-07-25	-570day
Teaching Buil	2F	11-011-000028012	Check Point 2-3	Extinguisher	Dry powder fir	Dry Powder Fi		2015-07-25	-570day
Teaching Buil	2F	11-011-000028013	Check Point 2-3	Extinguisher	Dry powder fir	Dry Powder Fi		2015-07-25	-570day



## 3 Overall Management

- 3.3 Event and process management
  - Alarm and its process
  - Fault
  - Repair process
  - Maintenance process



- 3.4 Risk source
  - Electric appliances
  - Inflammable
  - Radioactive source

Building Name: Unit 2 Room/Lab Number: 1

**IN CASE OF EMERGENCY**

- Fire, injury, or other, outside of normal working hours, call ext. 5000.
- Monday through Friday, 8:00 a.m. to 5:00 p.m., call the EH&S Office at ext. 6727.

Tell them:  
Who you are, where you are (building and room/lab), the nature of the emergency, and stay on the line for further instructions.

If laboratory occupants are not present, contact:

Name	Day Phone	Night Phone
1. <u>[REDACTED]</u>	<u>(609) 256-3199</u>	<u>(609) 256-0113</u>
2. <u>[REDACTED]</u>	<u>[REDACTED]</u>	<u>[REDACTED]</u>

**HAZARDS PRESENT**

<input checked="" type="checkbox"/> Flammable Gases	<input type="checkbox"/> Biohazards: Biosafety Level 2 materials
<input checked="" type="checkbox"/> Flammable Liquids	<input type="checkbox"/> Animals
<input checked="" type="checkbox"/> Noxious Gases or Vapors	<input type="checkbox"/> Projects under pressure or vacuum
<input checked="" type="checkbox"/> Corrosive Liquids (Acids or Bases)	<input type="checkbox"/> Continuously heated or cooled projects
<input checked="" type="checkbox"/> Water Reactive Materials	<input type="checkbox"/> High voltage
<input type="checkbox"/> Neurotoxins	<input type="checkbox"/> Computers
<input type="checkbox"/> Radioactive Materials	<input type="checkbox"/> Other (list below)
<input type="checkbox"/> Lasers	

List Specifics:

Dioxins

Poisons

**FIRE HAZARD**

**REACTIVITY**

4 - Severe  
 3 - Serious  
 2 - Moderate  
 1 - Slight  
 0 - Minimal

**SPECIFIC HAZARD**

WARNING - THIS AREA CONTAINS A HAZARDOUS SUBSTANCE



## 4 Benefits



### Precise, Visual

All Data and GIS-based  
Visualize:  
Fire Inspection  
Fire Suppression  
Fire Evacuation  
Fire Drill



### High-efficient

Data Process, Mobile  
handling,  
Support Internet and  
IoT(Internet of things)



### Free-from- Responsibility

Responsibility Chain  
Clear with department  
and role,  
Based on fire safety  
Data  
More fairly



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See something,  
Say something!

# THANKS

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