

China's National Early Warning Releasing System (NEWRS)

ROME, ITALY ,SEPTEMBER 2017

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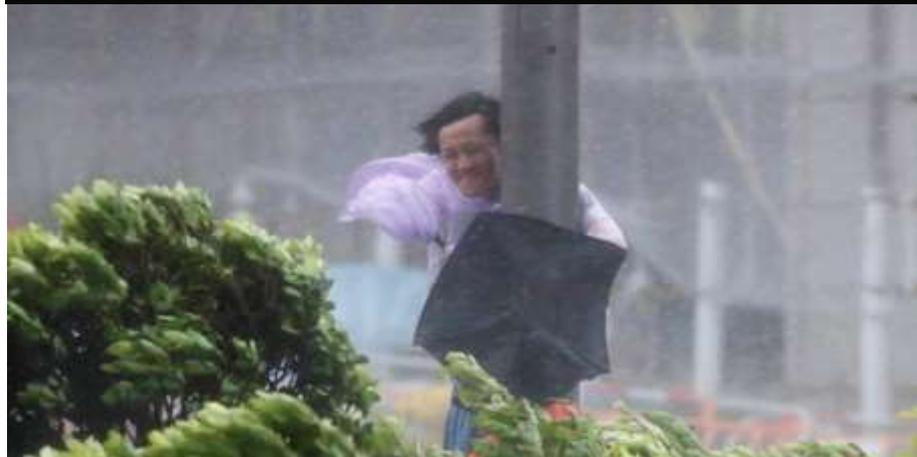
1. Background

2. Construction and system functions

3. Application and access

Frequent disasters

Natural disasters



Typhoon NO.13 "Hato" of 2017.

Accidental disasters



Explosion in Tianjin Binhai New Area in August 2015.

Public health events



SARS spread all over the world in 2003.

Social security incidents



Social security incidents of Shanghai in Dec. 31st 2014.

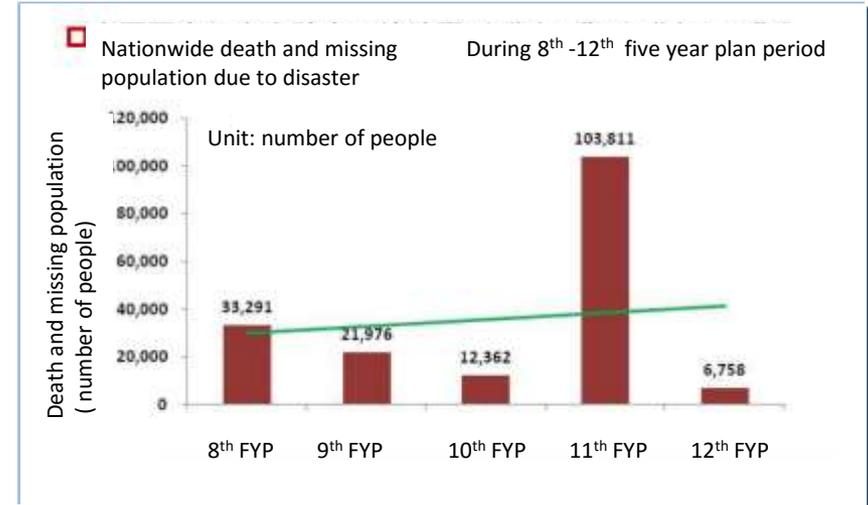
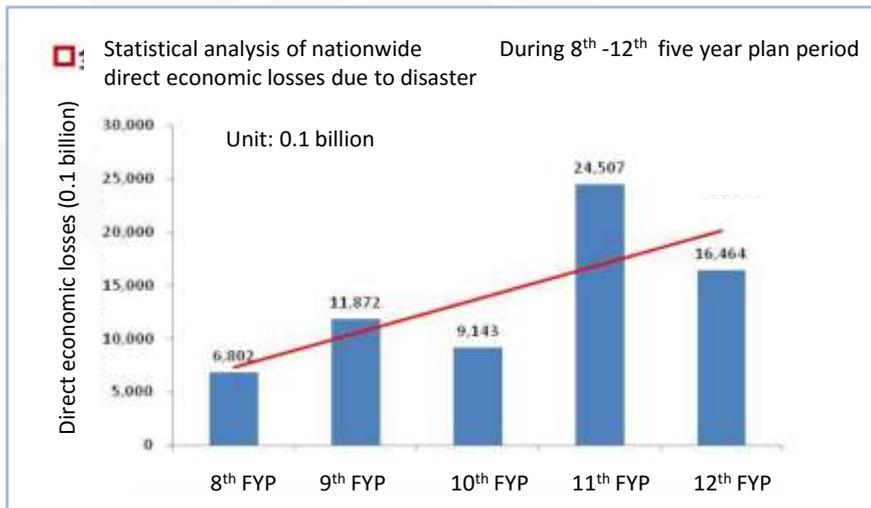
Background

Grave Losses of natural disasters

Every year : More than **10,000** death

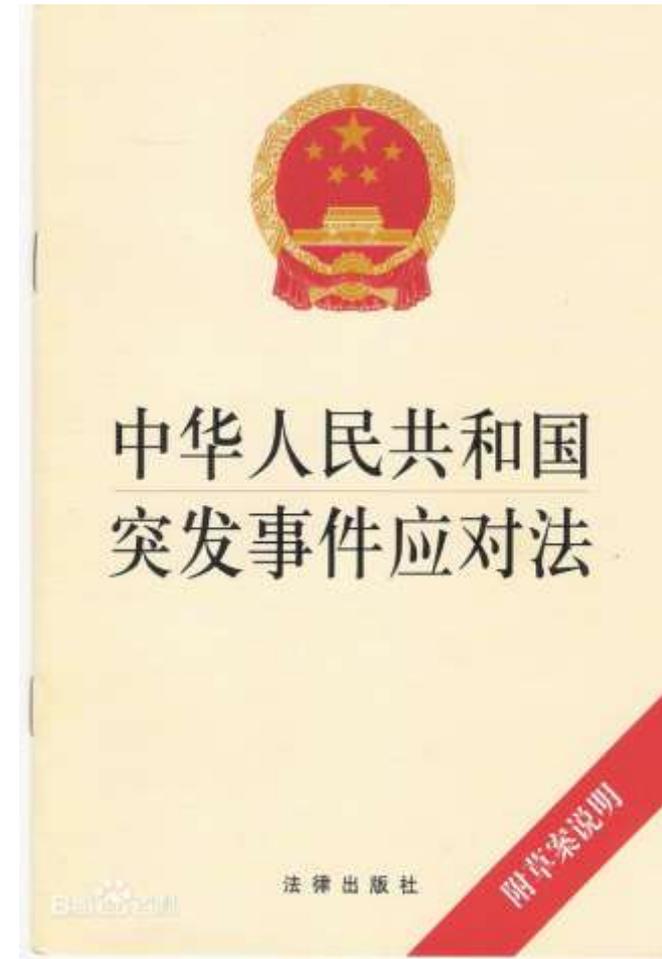
More than **400 million** persons affected by disasters,

Economic loss more than **RMB 260 billion**



Background

- The state council should establish a nationwide unified early warning release system
- The country should establish and perfect the system of emergency monitoring
- The country should establish and perfect the **system of emergency early warning release**



《The Law on Response to Emergencies》
Implement since November 1,2007

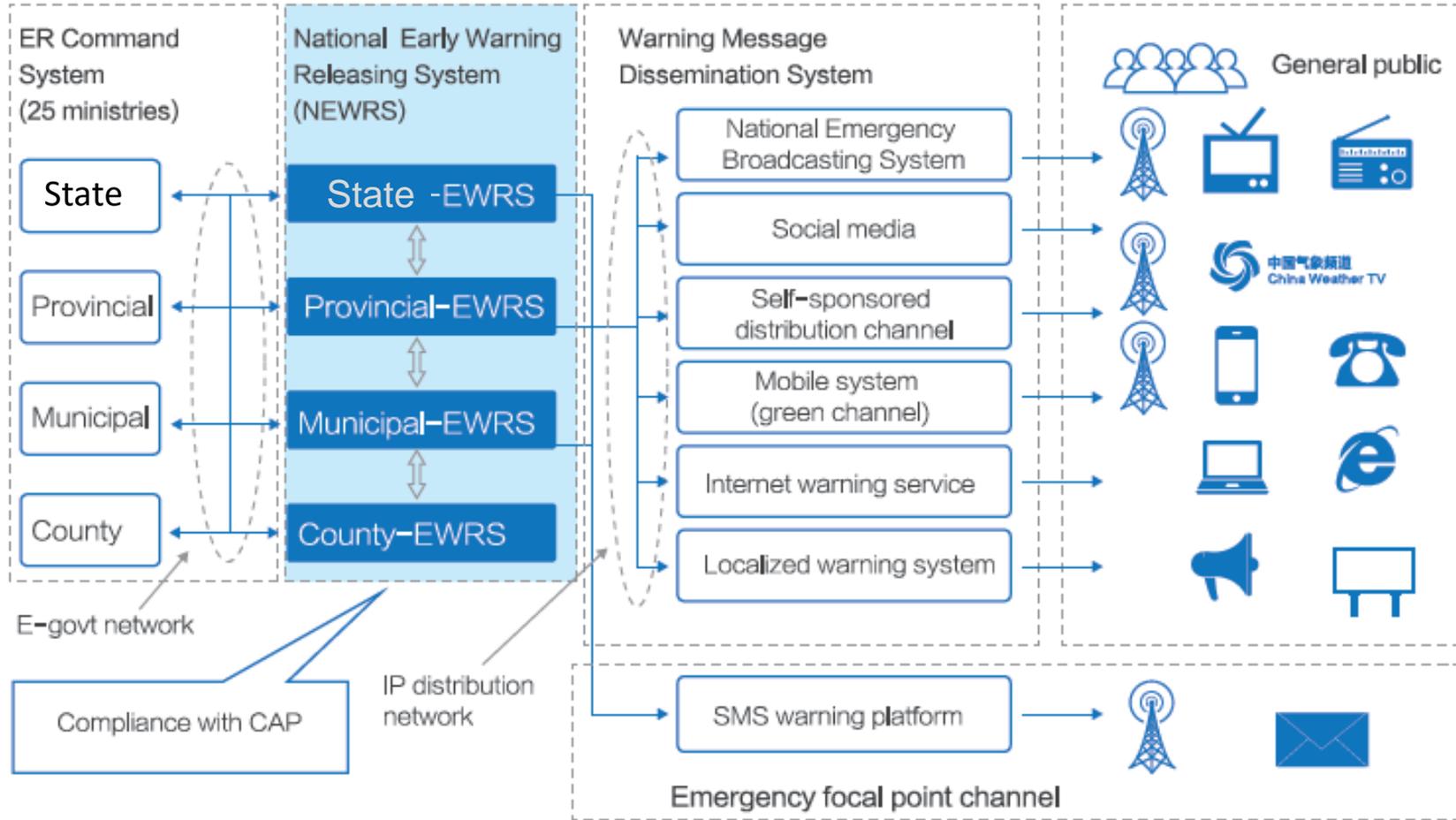
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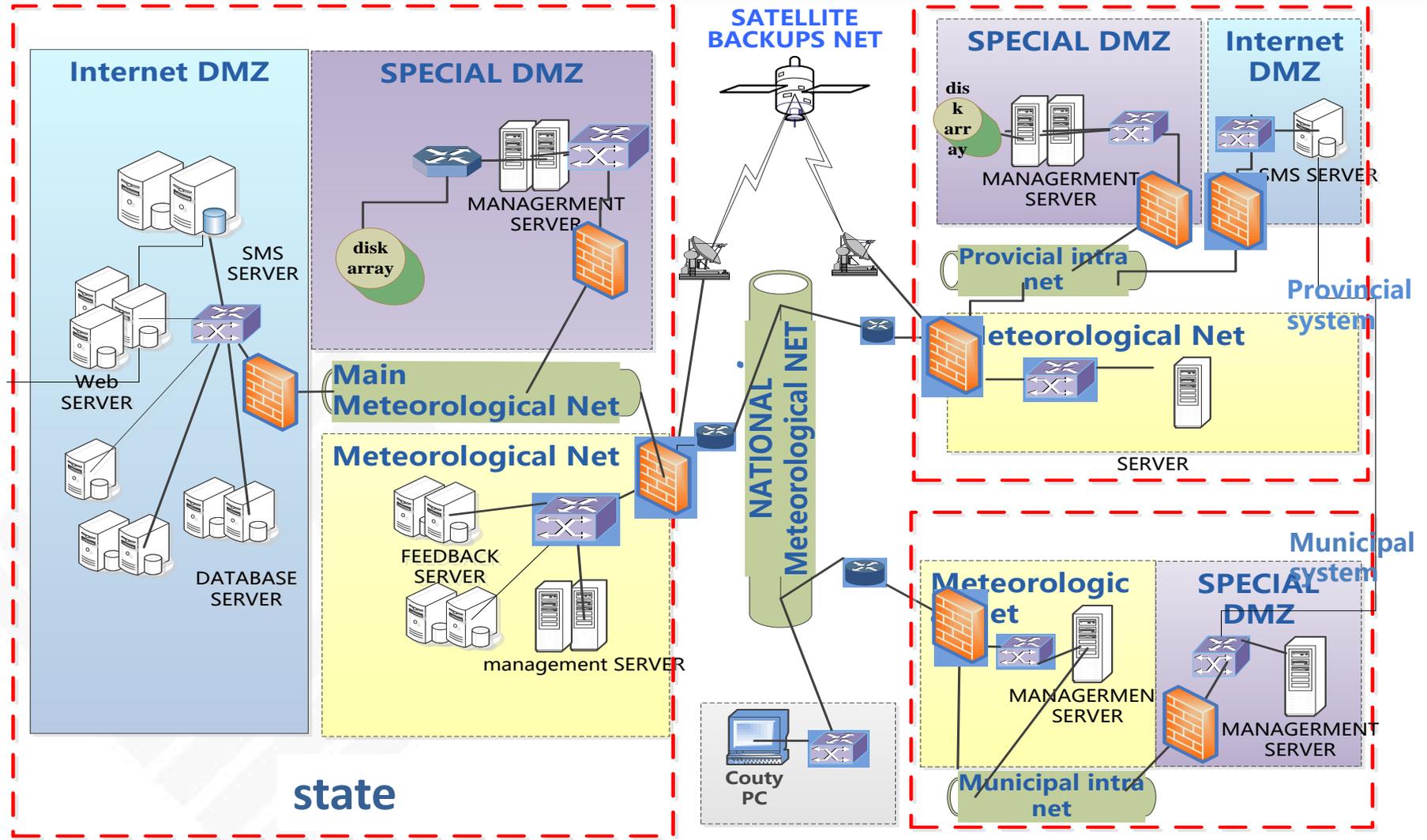
2. Construction and system functions

3. Application and access

NEWRS relationship and structure



NEWRS's framework



Longitudinal and horizontal inter-connected, deployment of three levels and four levels application platform, the message transmission base on the meteorological broadband network

Alert horizontal transmission

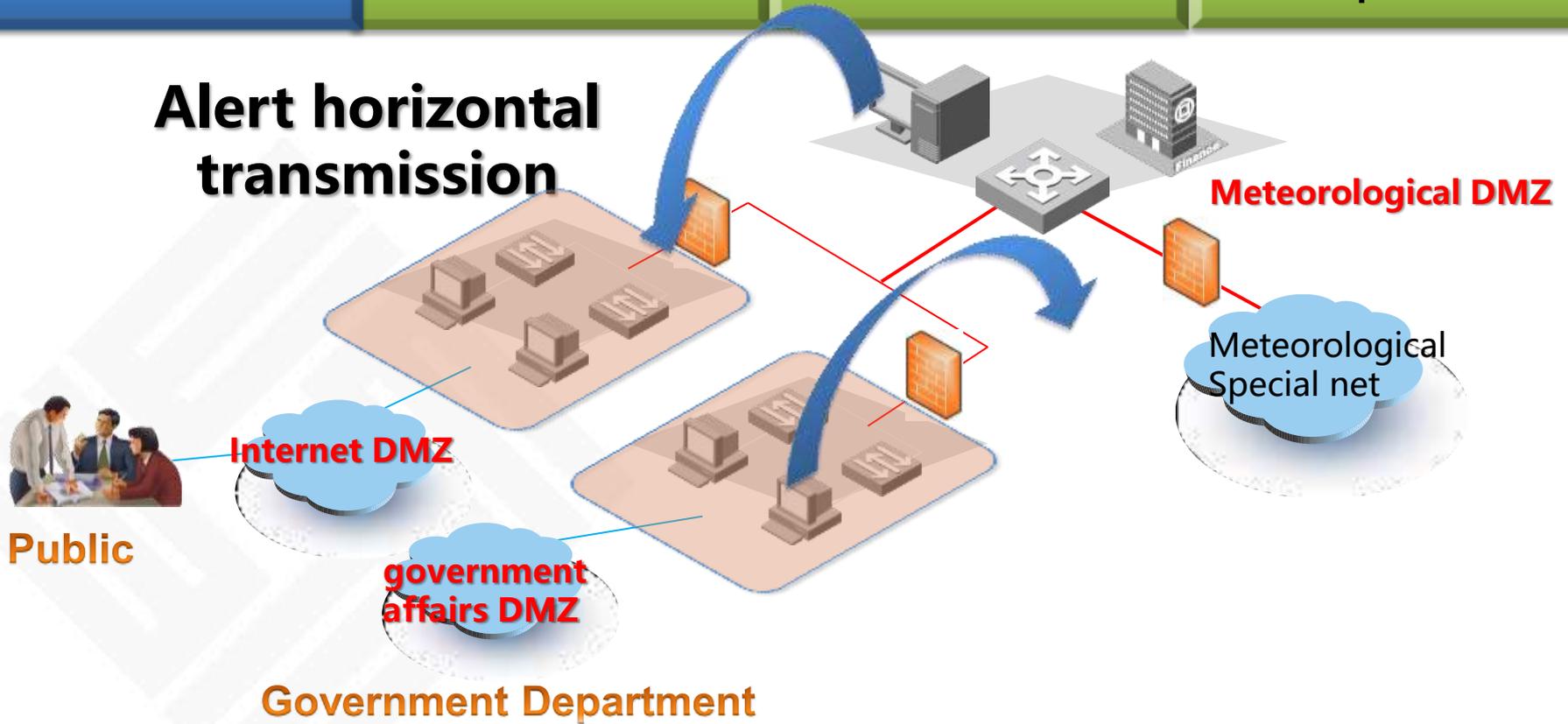
Transfer safe

Trail Record

Unified standard

Multiple method

Alert horizontal transmission



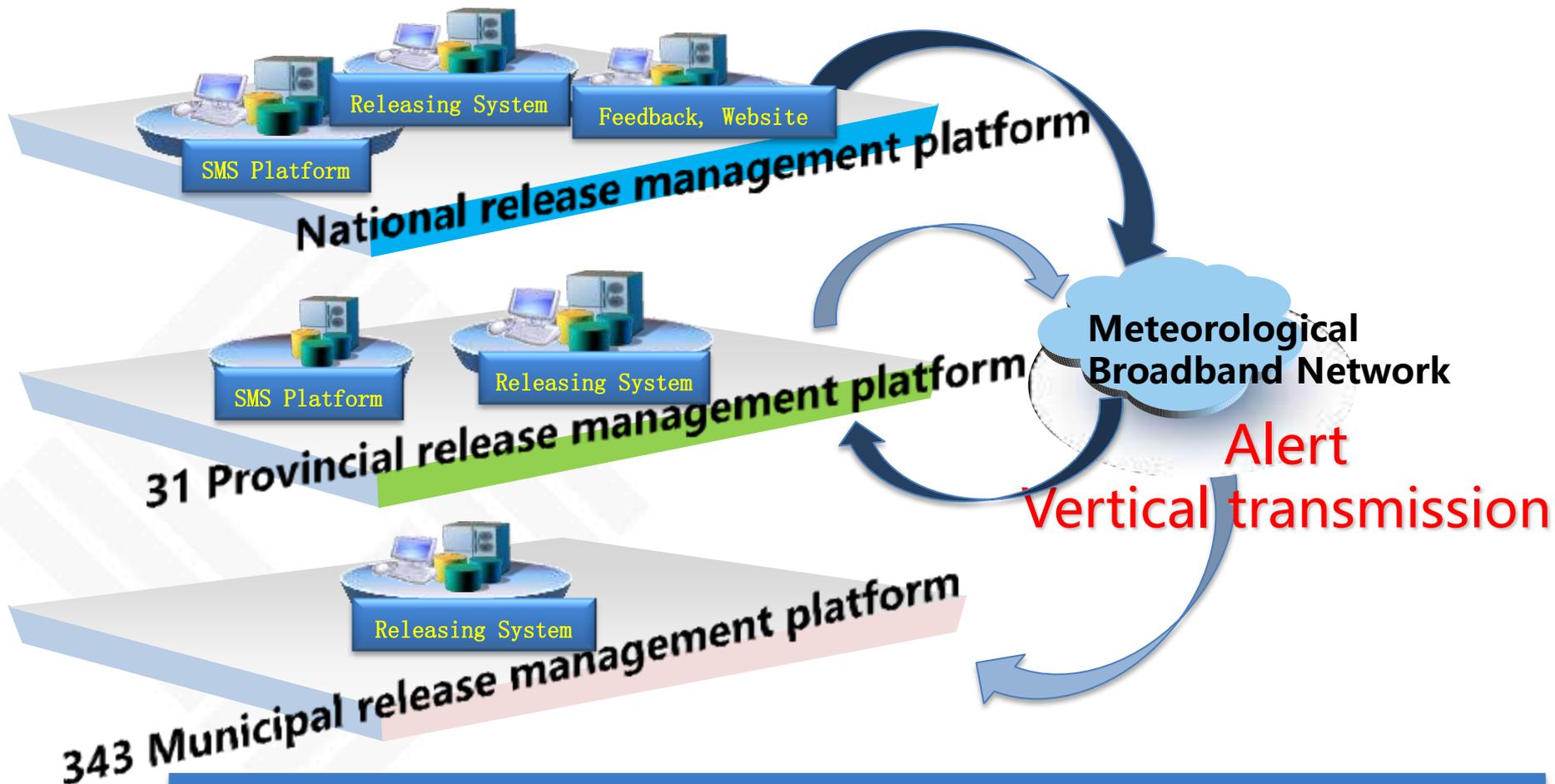
Vertical transmission between the three-level platform

Reliable transmission of information

Trackable life cycle

Unified standard, flexible configuration

Release channel flexible configuration

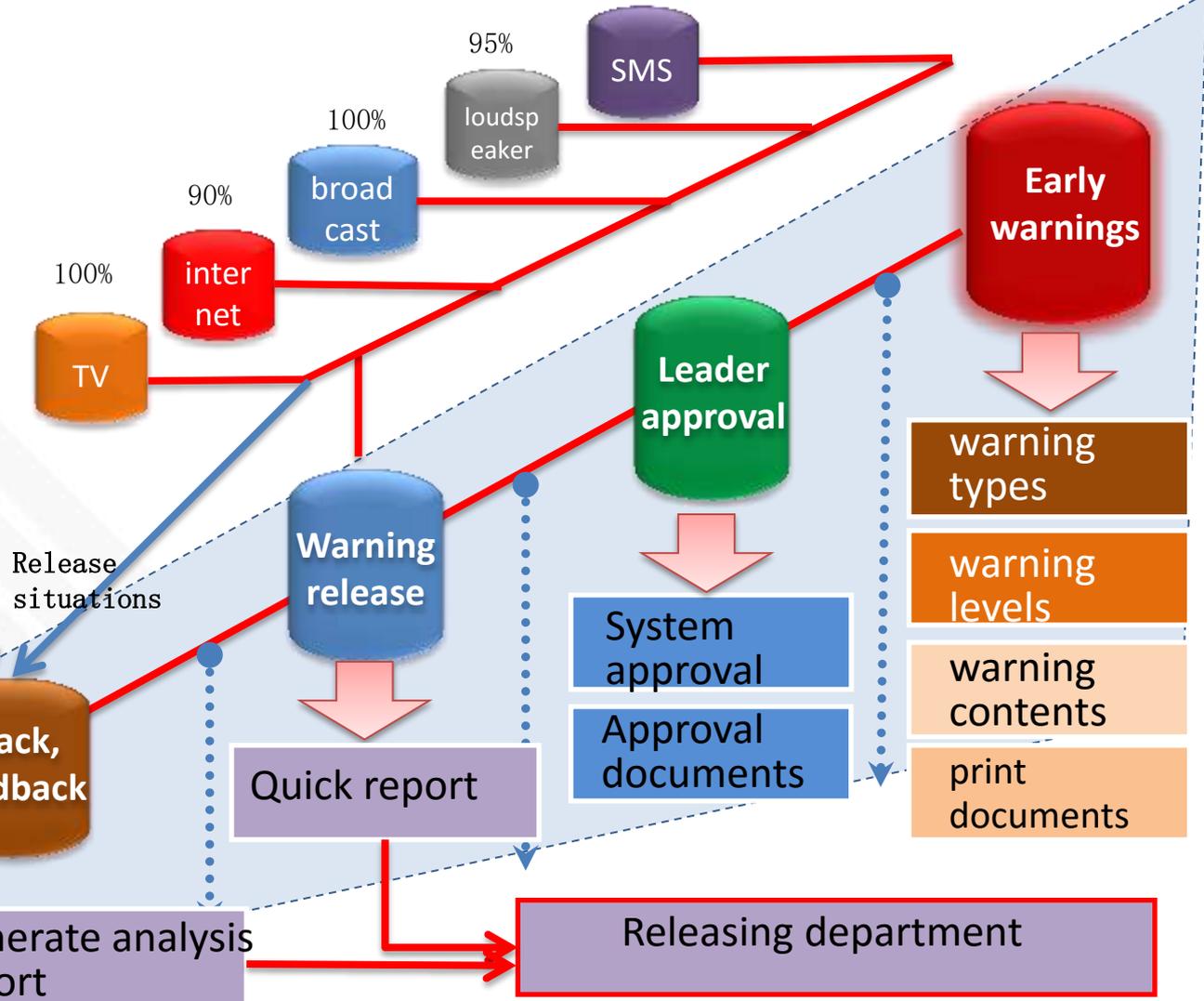


Three-tier security measures to achieve cross-regional, provincial and municipal point-to-point secure transmission

Overall process



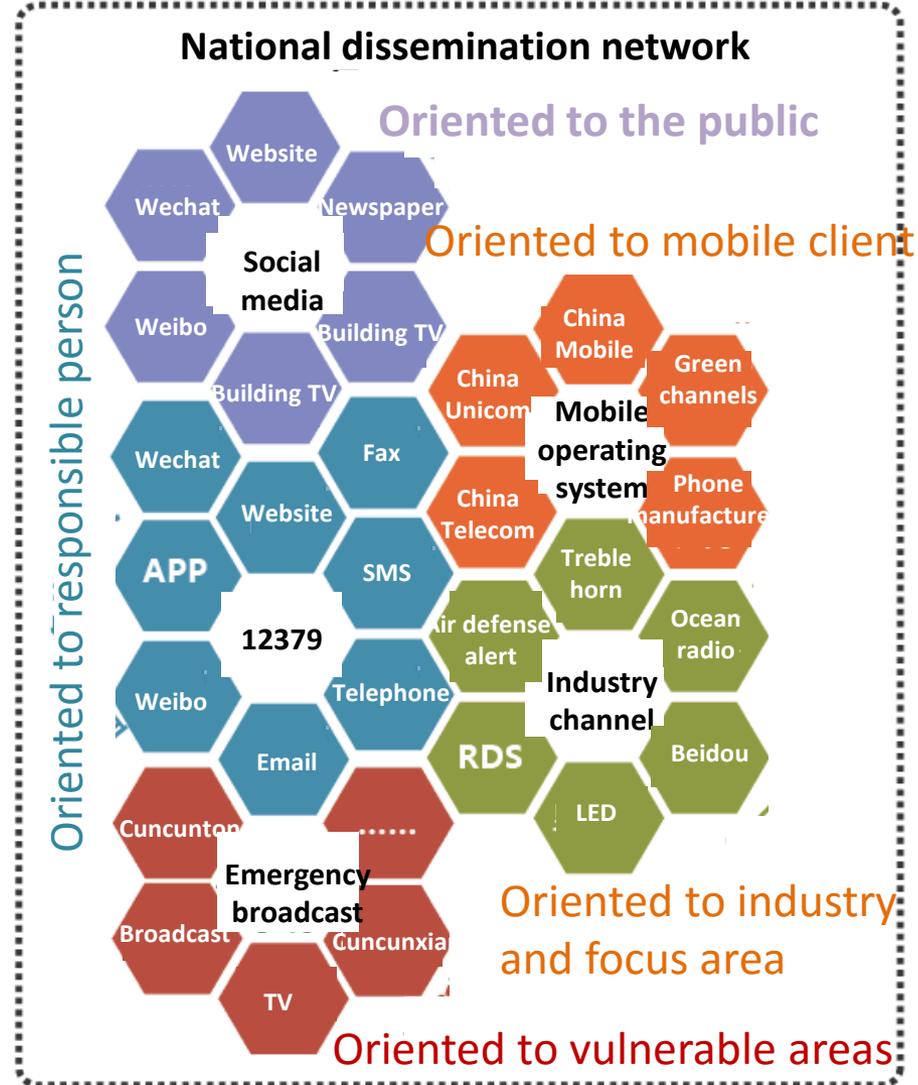
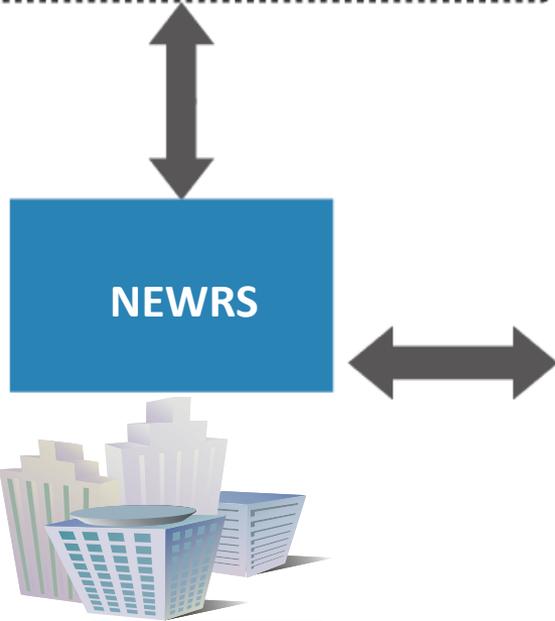
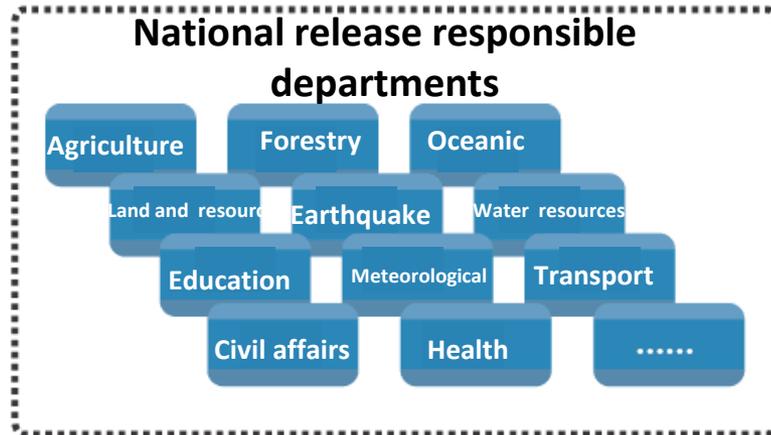
Live image and public opinions



Provide overall solutions and quality service

- 1 omnimedia release of early warning
- 2 rapid release of the designated area via entire network
- 3 barrier-free sharing of early warning across departments
- 4 dedicated channel for local messengers
- 5 real-time feedback of release effect
- 6 warning release security assurance

1. omnimedia release of early warning



Wide coverage of early warning dissemination network



Broadcast and TV

- Television instant inter-cut of **30 provinces**, radio instant inter-cut of **31 provinces**
- **Emergency network** : Implement the docking with emergency network comprehensive emergency, demonstration of **2 provinces**



National social media

- **Tencent** : Cover **600 million** WeChat users and **400 million** QQ users with popup
- **Ali** : Covering **400 million** Alipay users
- **Baidu** : Cover **83%** internet users with Baidu search and map
- **Sina** : Cover **300 million** microblog users



Business & Operating Support System

- **Green channel** : **31** provinces SMS to effect area
- **Mobile phone producers** : discuss with lenovo, Huawei on **mandatory app installation standard**

Wide coverage of early warning dissemination network



Distribution Channels of different industries

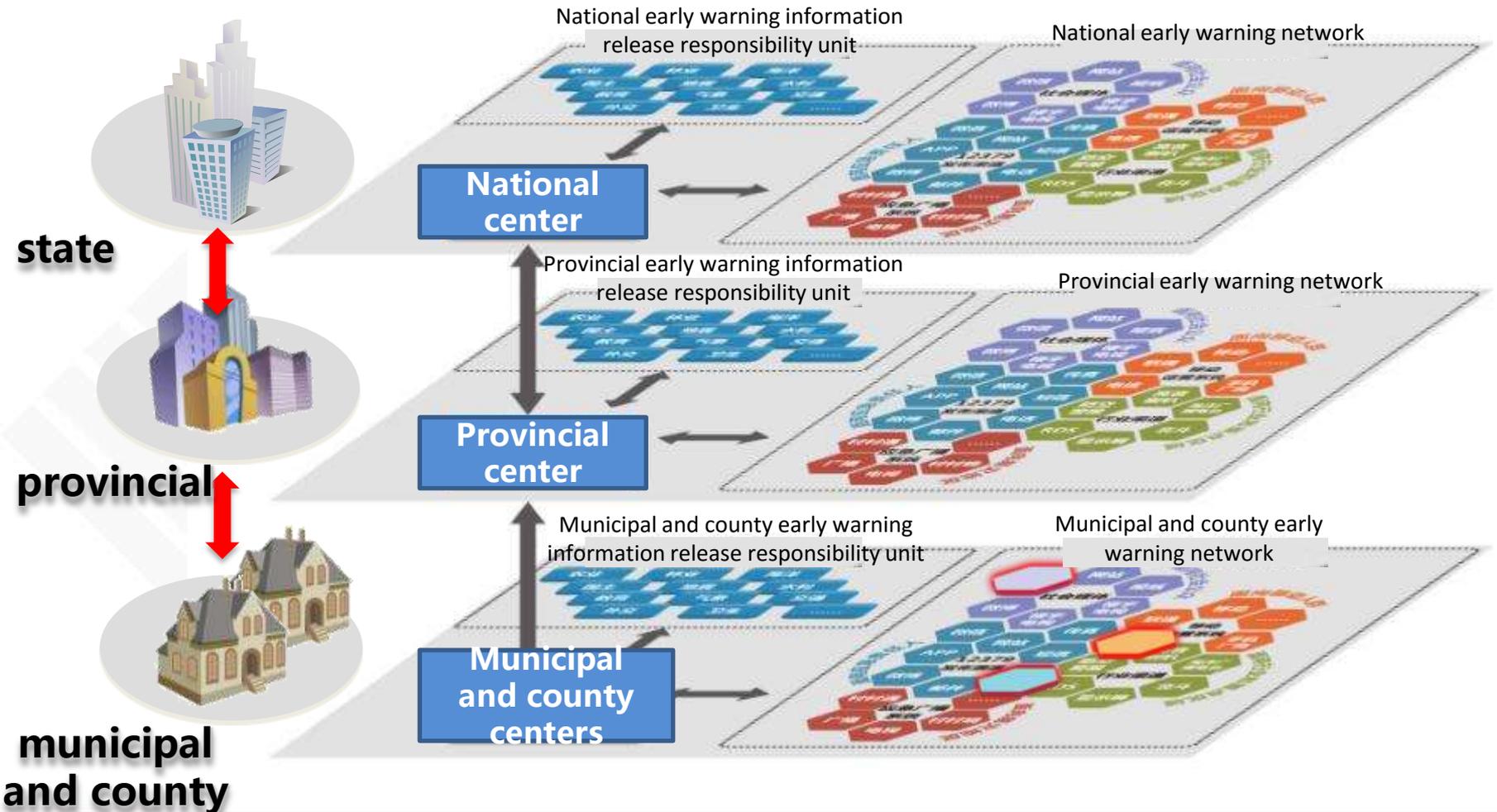
- Docking with **145,000** meteorological LED screens, **329,000** meteorological early warning loudspeakers
- **78,000** rural information service stations, covering **95.6%** villages and towns
- **8** marine broadcasting radios



12379 release channels

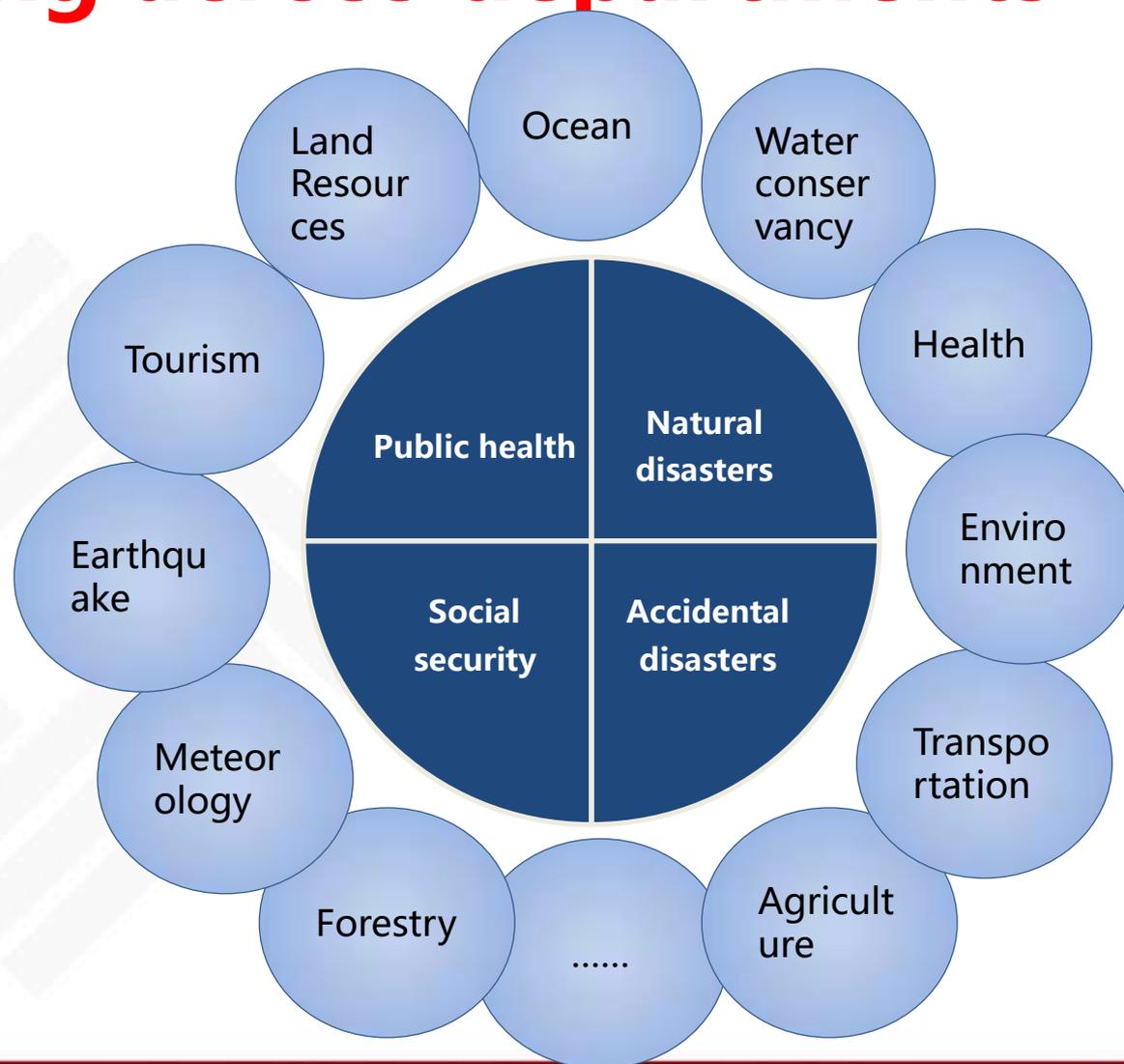
- **SMS** : **23 provinces** established **entire network release mechanism**, covering early warning information officer at the local level
- **Internet** : Cover **170 million** internet users and **50 million** mobile users
- **Emergency Channel** : In **31 provinces** of **314 cities**, covering **92 million** digital subscribers

2. rapid release of the designated area via entire network



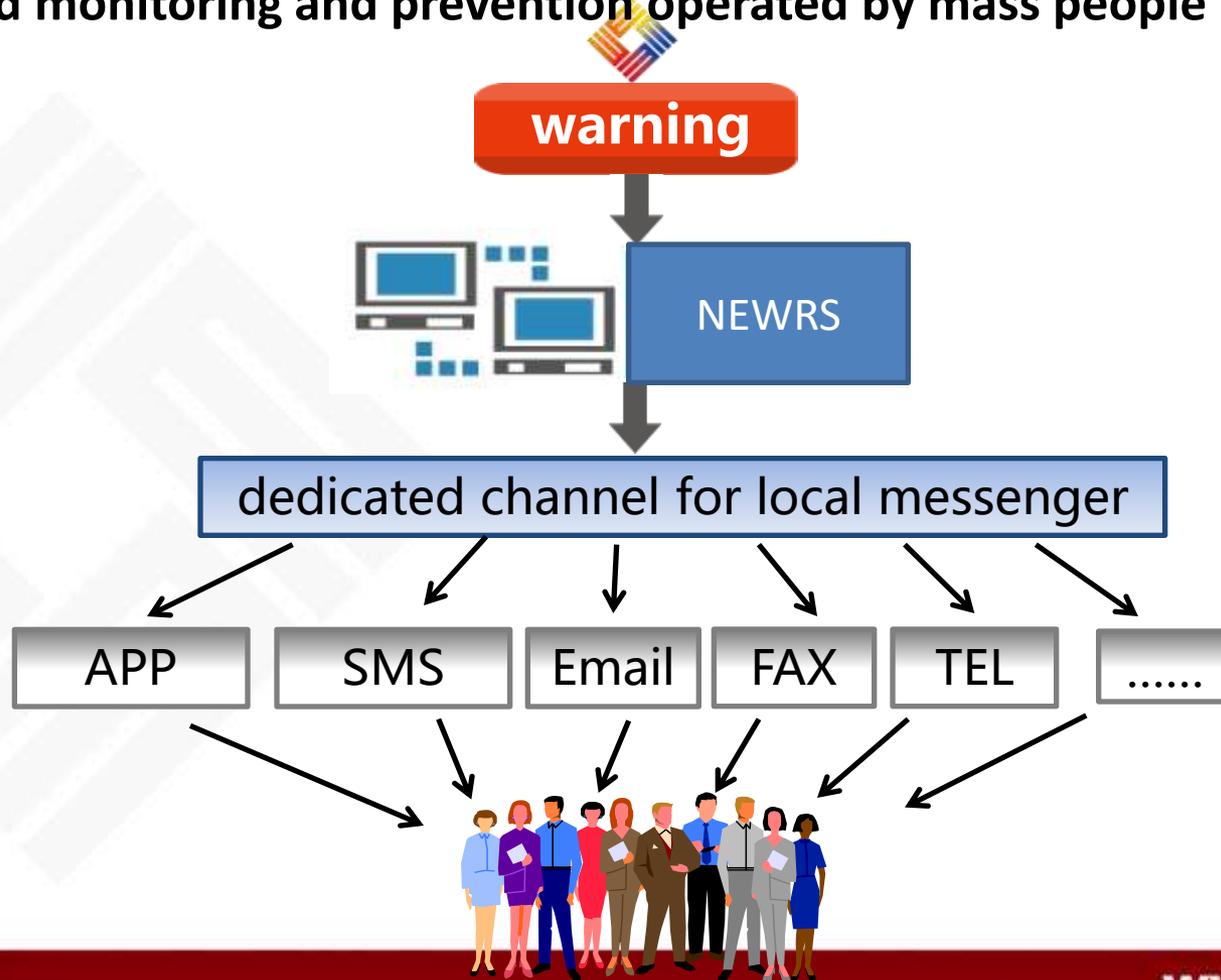


3. barrier-free sharing of early warning across departments

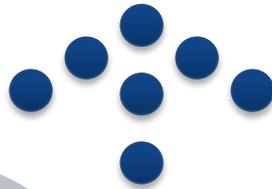


4. dedicated channel for local messenger

Fast and accurate warning release for Departments' emergency duty staff, emergency linkage department, local messenger early warning information, to realize hazard monitoring and prevention operated by mass people



5. Real-time feedback of release effect



Real-time feedback

For early warning release trace of incidents before, occur, peer-to-peer feedback assessment report service for various departments

Specific support

Collect distribution channel types, local messengers reception, the public and geographical coverage, the effective number of terminal equipment of each early warning

5. Real-time feedback of release effect



The real-time monitoring platform for the release of emergency warning messages in China watches the operation of NEWRS, the releasing processes, the releasing pattern for a specific periodic event, the varied and multi-channeled applications of messages, and the real-time disaster monitoring data and so on to be informed of the population reached in a timely and adequate manner so that the operation is made visible and visual.

6、 warning release security assurance

- 24-hour assurance for the secure and stable operation of the system
- Round-the-clock warning re-check for release
- Early warning access and dissemination technical support service at any time
- Disasters prevention publicity and popularization, and training

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- 1. Background**

- 2. Construction and system functions**

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NEWRS built for 4 years since project approval

2011

- The national development and reform commission issued investment, and the **project construction started**

2012

- **Completed preliminary system** platform construction

2013

- Completed the in deployment , installation and **test** of provincial and municipal platform

2014

- System put into **trial operation**

2015

- System put into formal operation
- **System operation management method was issued**

National Early Warning Center



National Early Warning Center (Feb. 26. 2015) is mainly responsible for the construction, operation and maintenance of national early warning system, and offers an overall release channel for relevant departments, studies and formulates relevant policies and technical standards. As well as carries out early warning information to publicity and popularization.

National Early Warning Center





National early warning release system construction scale



- 1 national center
- 31 provincial center
- 343 municipal center
- 2015 county center
- 9026 specialty staff

Guangdong Early Warning Center

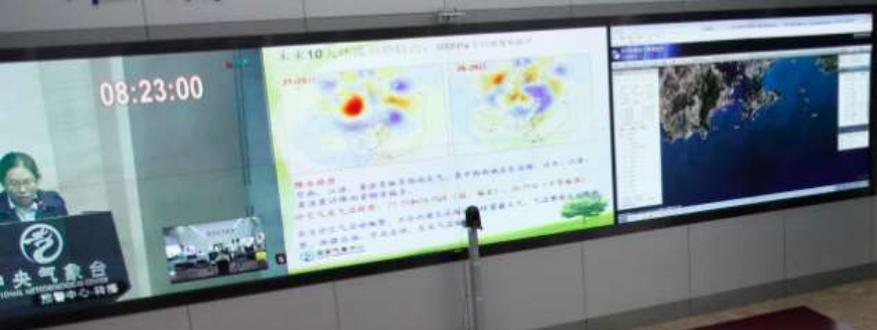


Shanghai Early Warning Center



Shenzhen Early Warning Center

准确 及时 创新 奉献

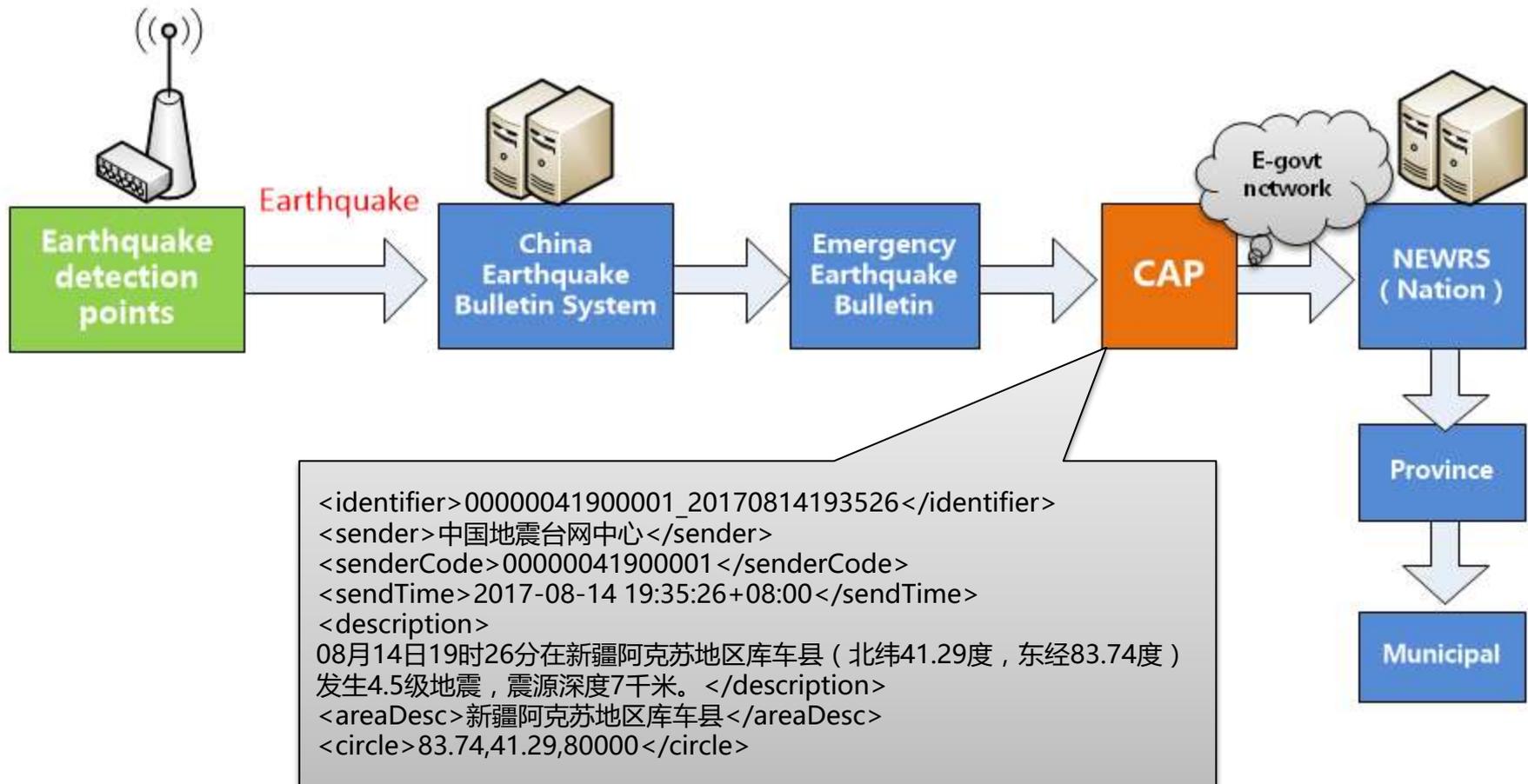


Guanling (county) Early Warning Center

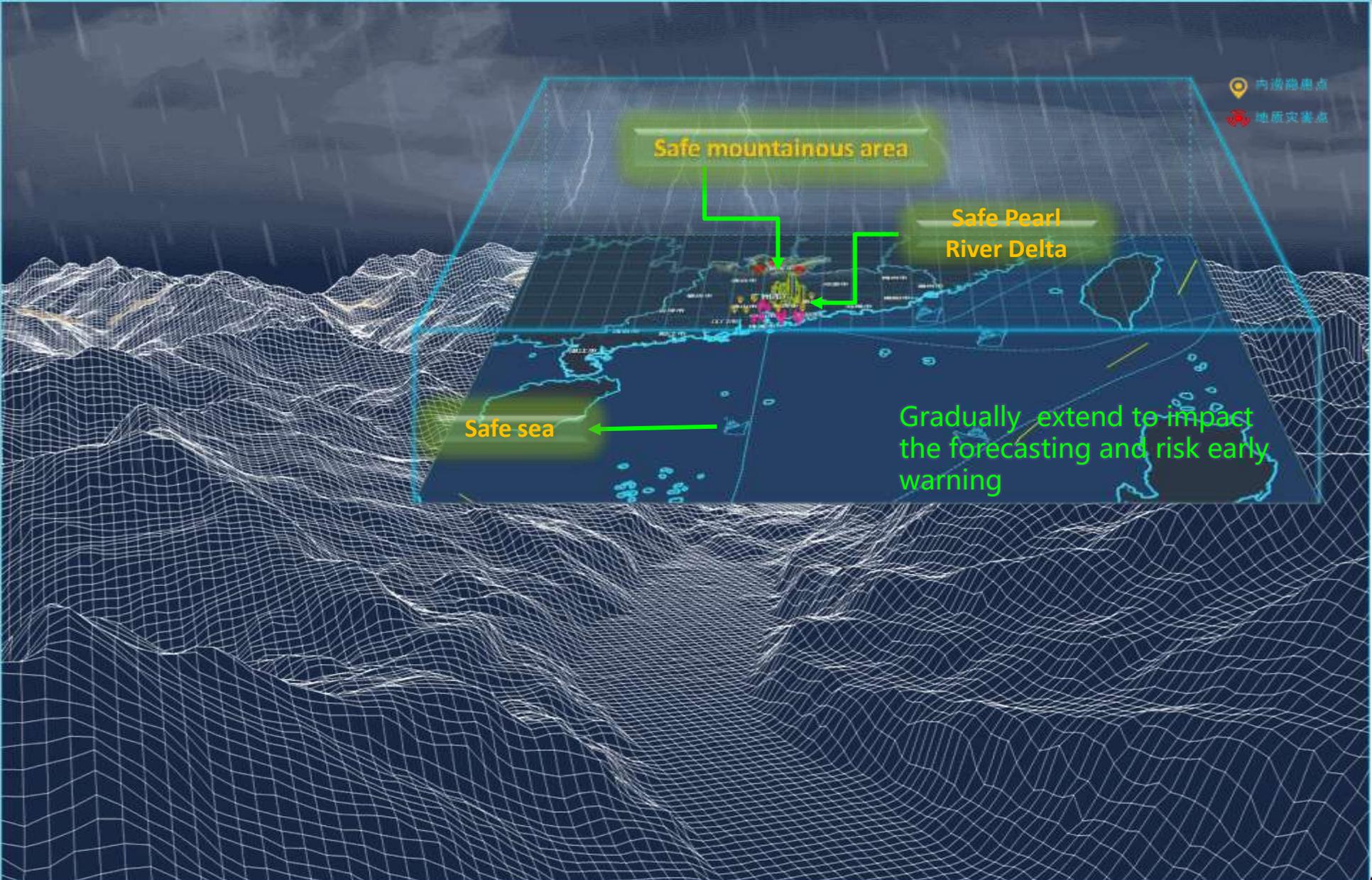


NEWRS docking with China Earthquake Bulletin System

Note: based on CAP, convert earthquake bulletin into CAP format that NEWRS can identify.

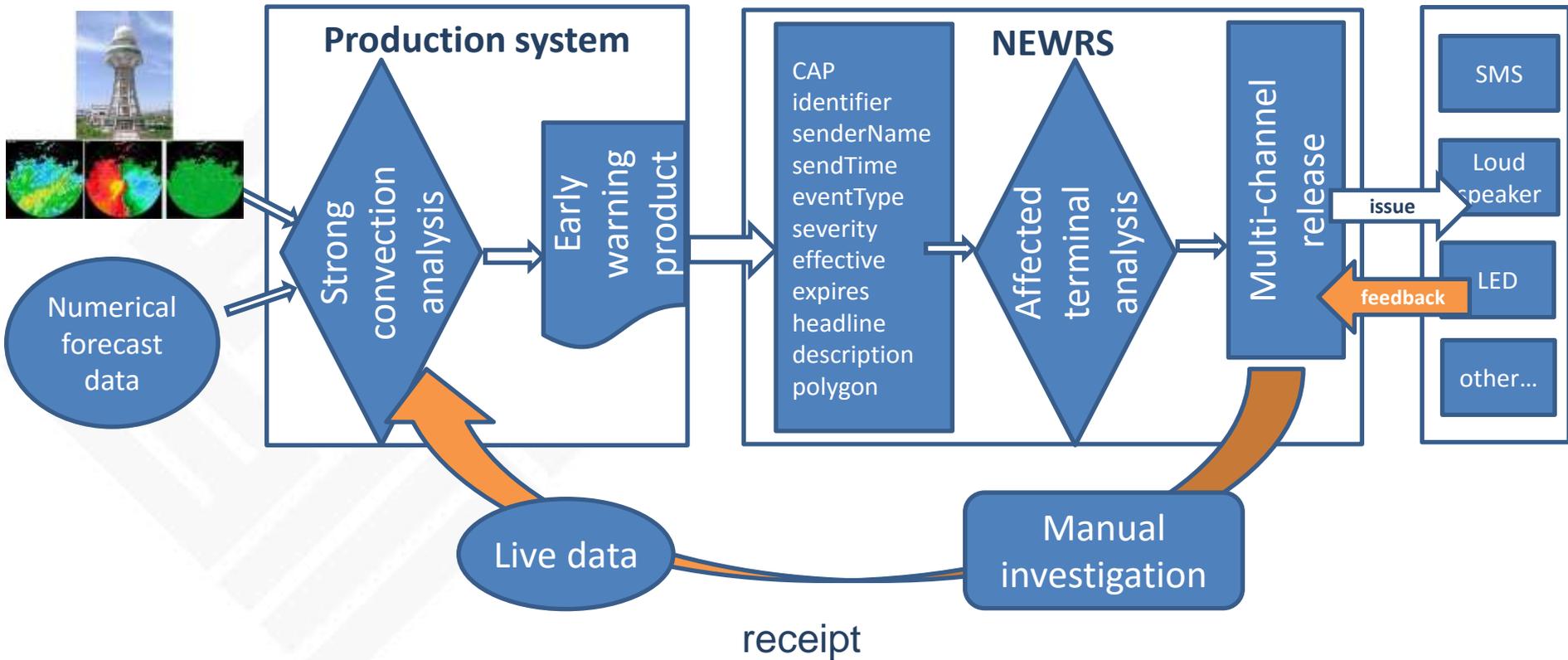


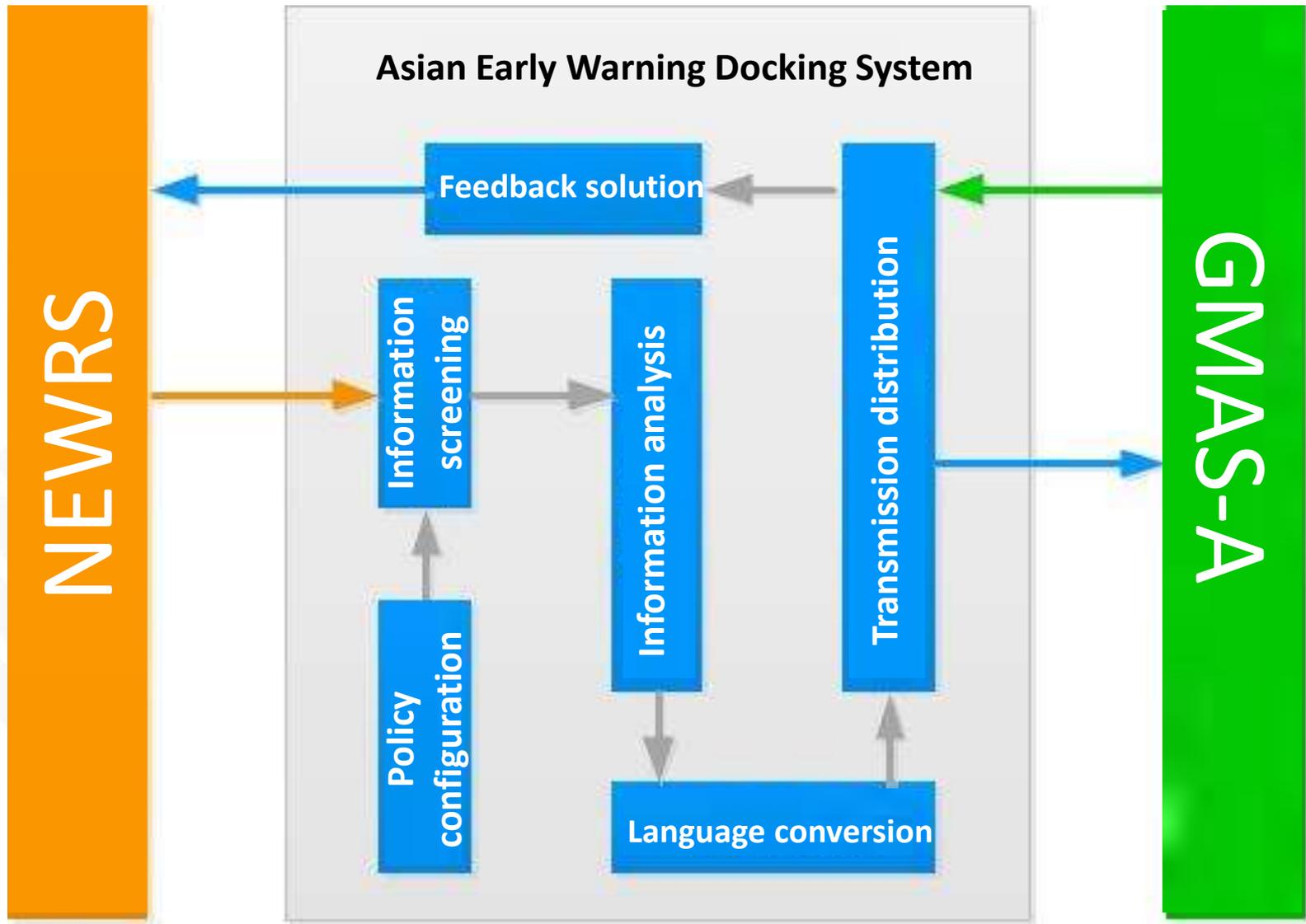
Landslide in Qingchuan, Sichuan province



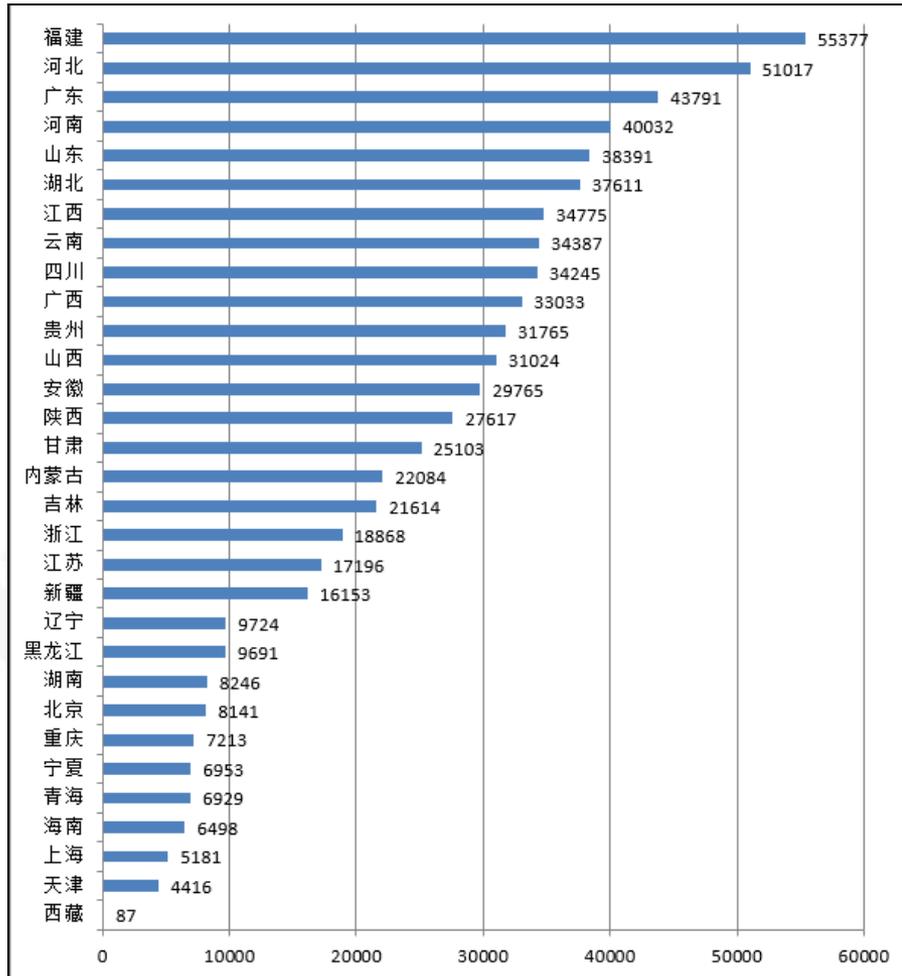
strong convection in Anhui province

Strong convective weather early warning precision distribution means management system

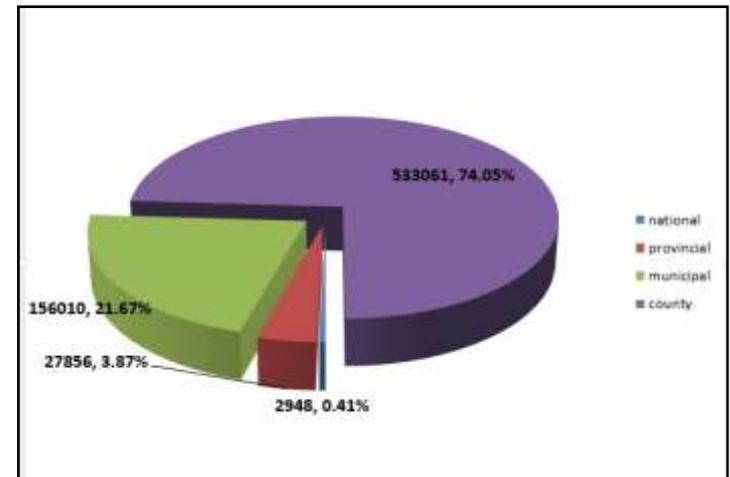
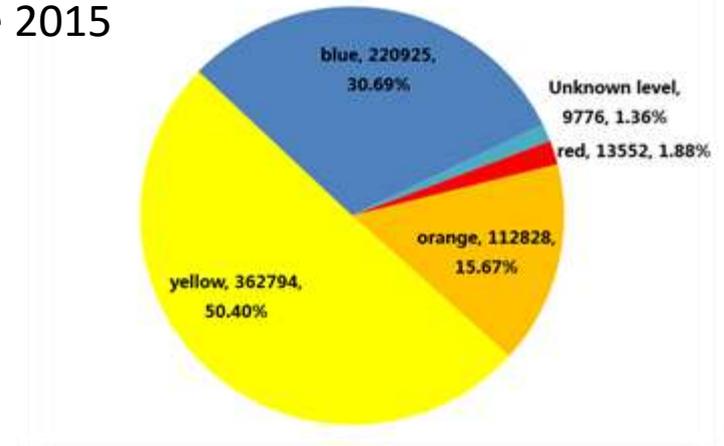




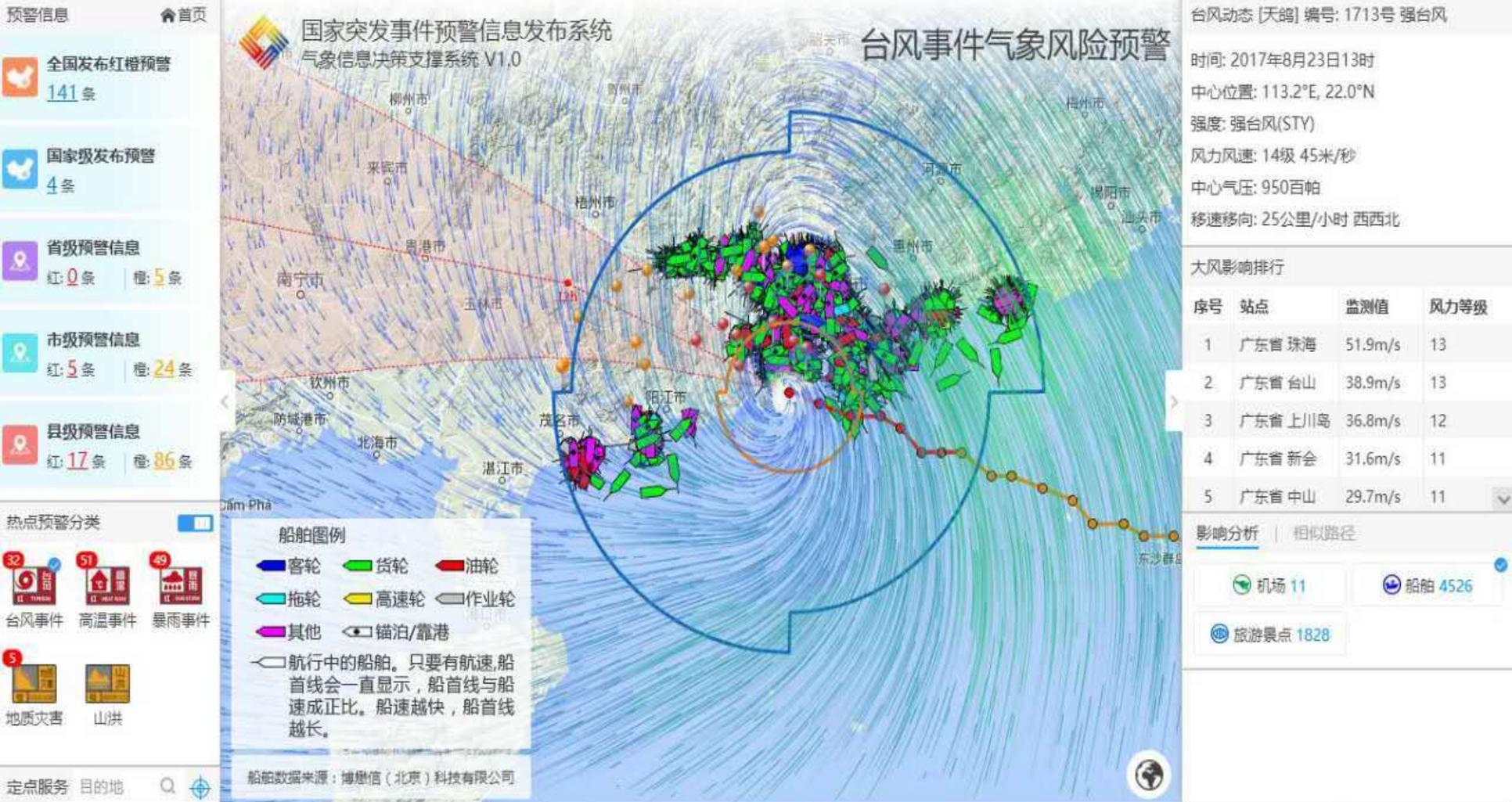
Since year 2015, NEWRS issued a total of 719,875 informations



National early warning release situation since 2015

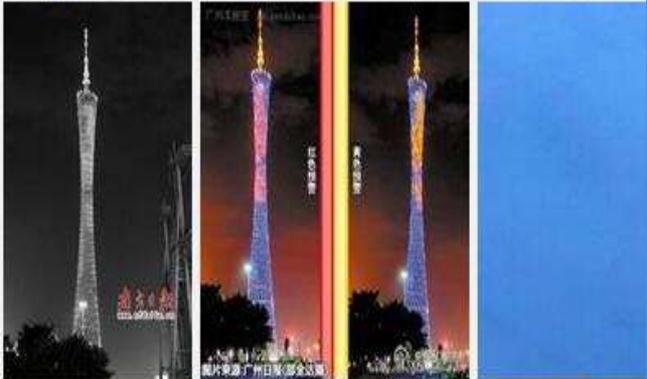


Typical Case

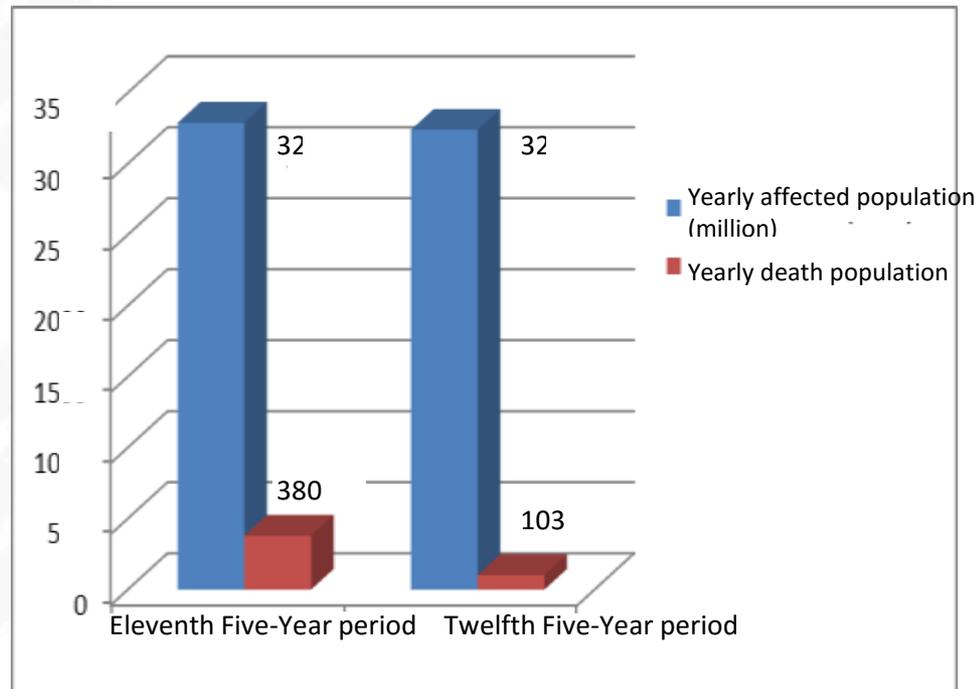


On August 23, 2017, Typhoon "Hato", No. 13 this year, landing in Zhuhai City Guangdong Province in strong typhoon intensity, with 741 million people affected, and direct economic losses of 12.18 billion yuan.

Typical Case



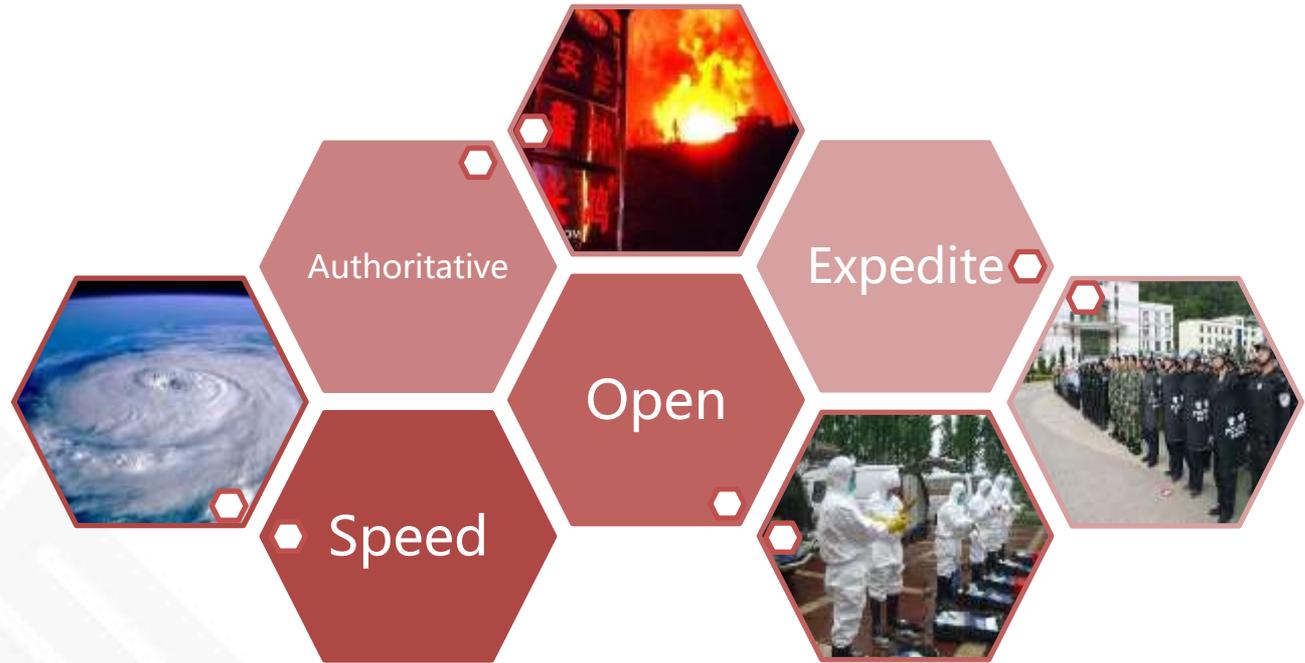
In the process of typhoon disaster defense in recent years, related departments issued early warning and guide sea vessels back to shelter timely, organized the transfer of millions of people, disaster reduction effect is obvious.



Typical Case

On Jul. 17th, 2016, two towns in Guzhang county, Hunan province, were under heavy rain. Flood control, Land and other relevant departments in Guzhang issued early warning information timely. At the same time, local government organized and transferred the masses quickly. No casualties caused in the landslides disaster. Emergency management structure with Chinese characteristics





Early warning makes life more secure!

THANKS!