China's National Early Warning Releasing System and GMAS-A

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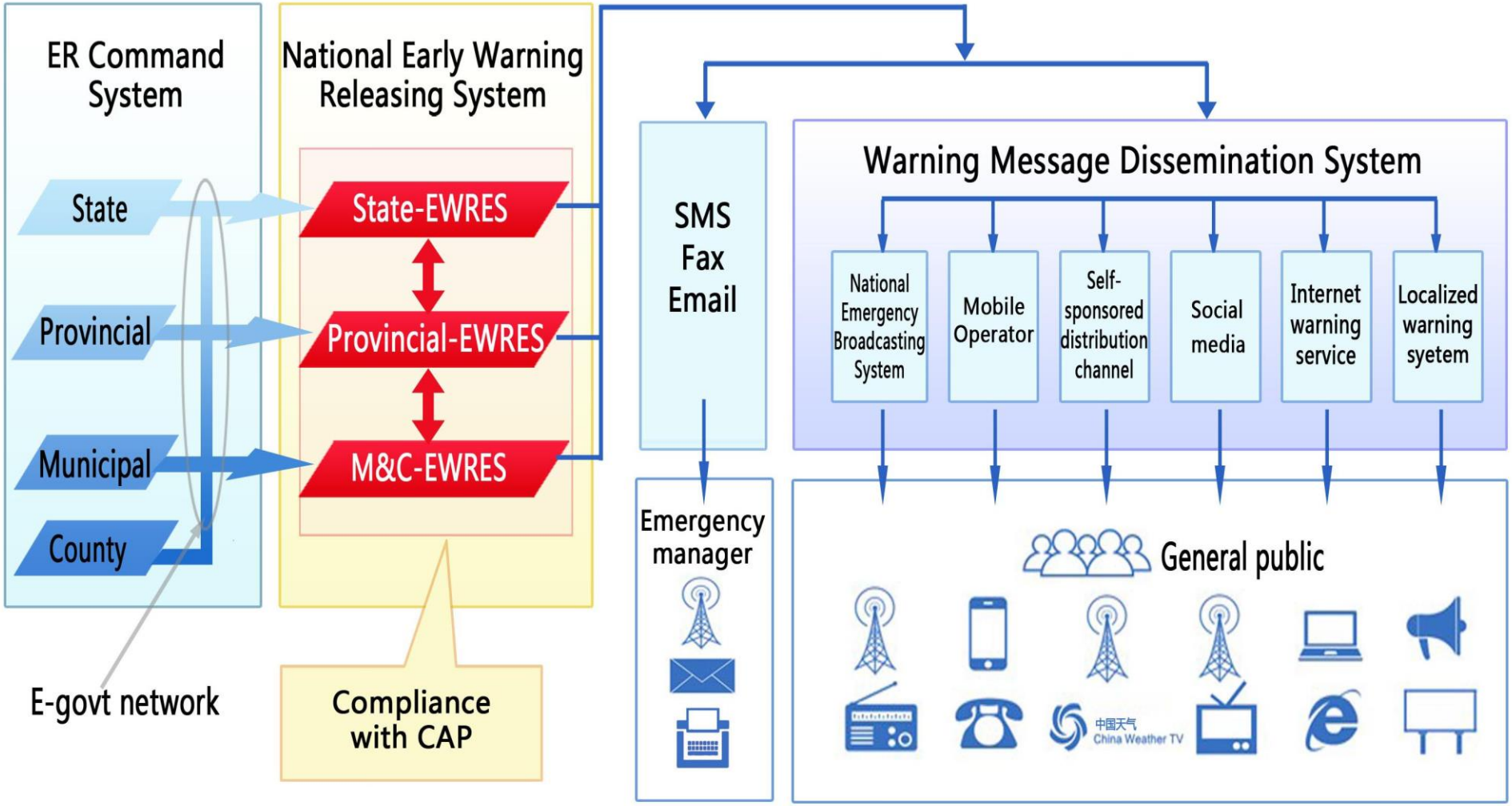
Contents

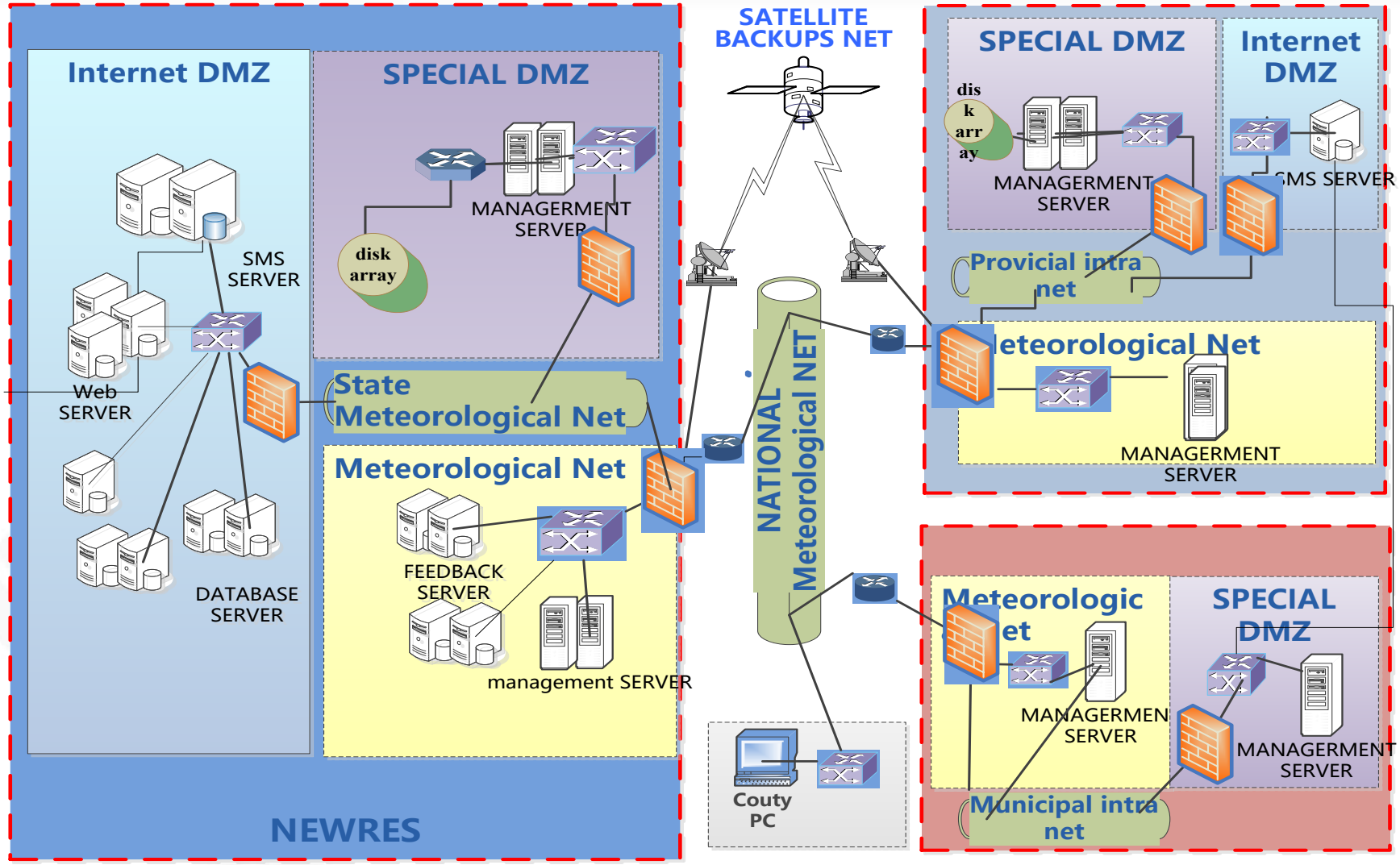
NEWRES built for 4 years since project approval

2011	2012	2013	2014	2015
• The national development and reform commission issued investment, and the project construction started	• Completed preliminary system platform construction	• Completed the in deployment, installation and test of provincial and municipal platform	• System put into trial operation	• System put into formal operation • **System operation management method was issued**

NEWRES's relationship with other Systems



NEWRES's framework



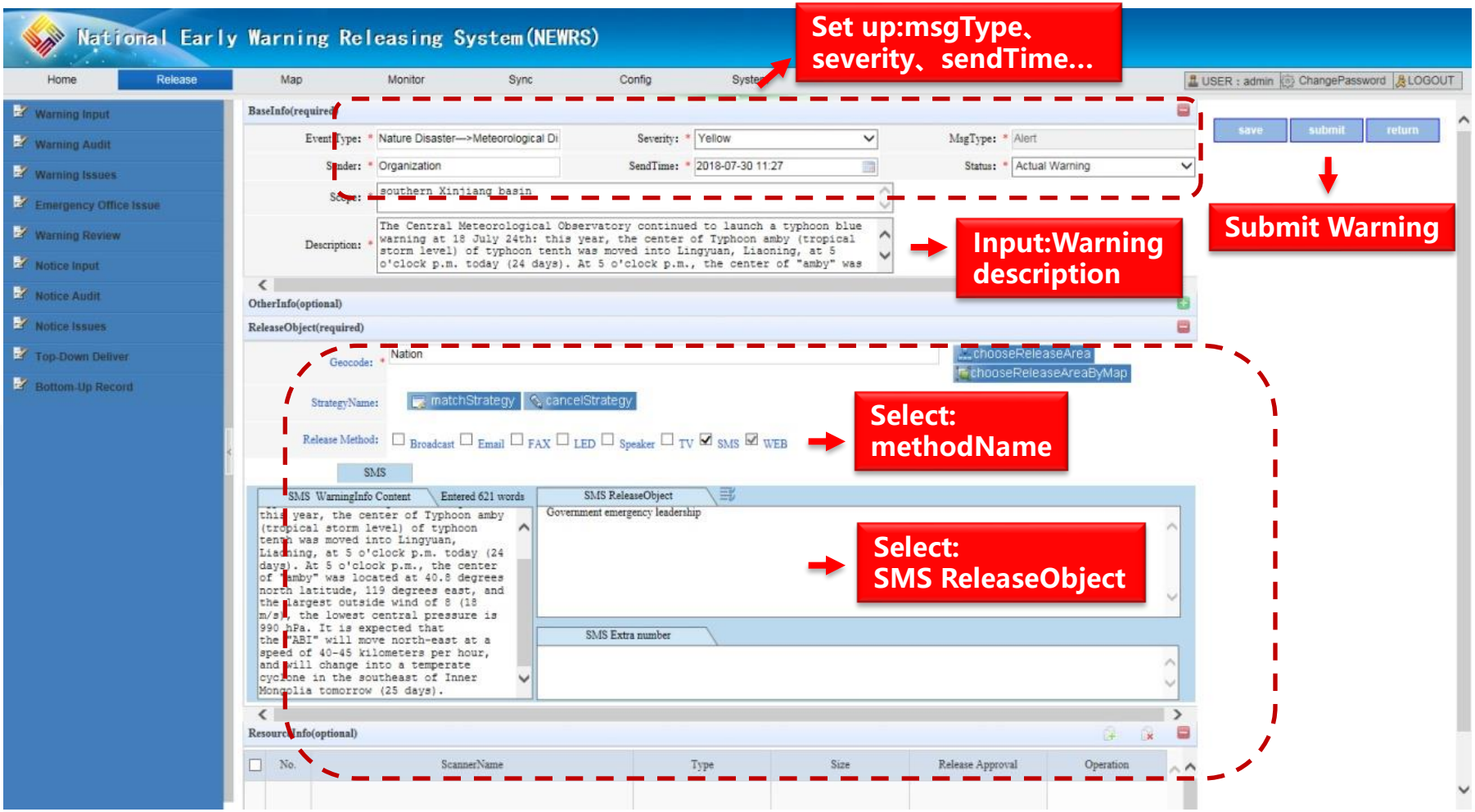
Longitudinal and horizontal inter-connected, deployment of three levels and four levels application platform

Warning Release Process

The login screen

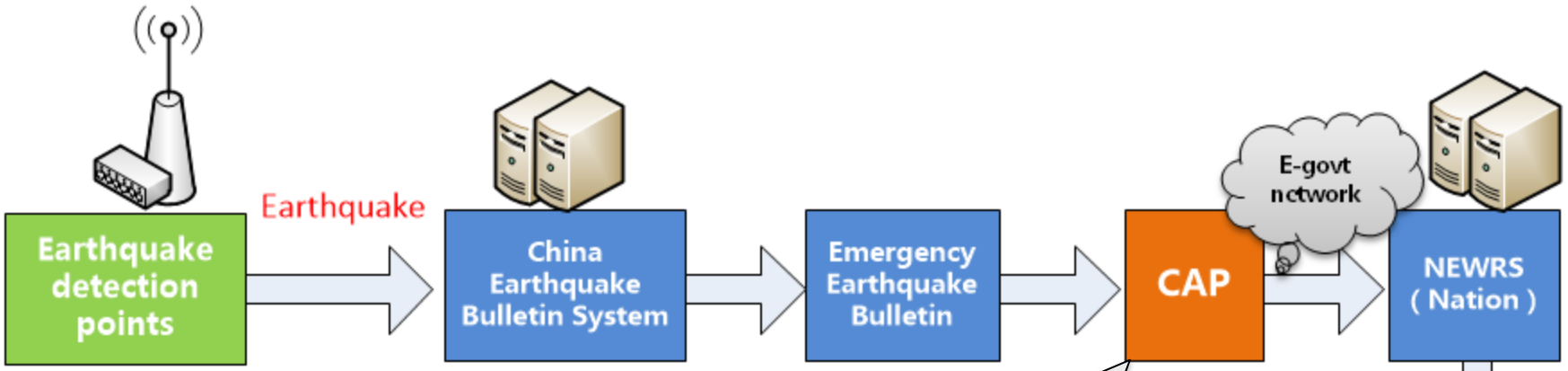
Warning Release Process

Early Warning Input Interface



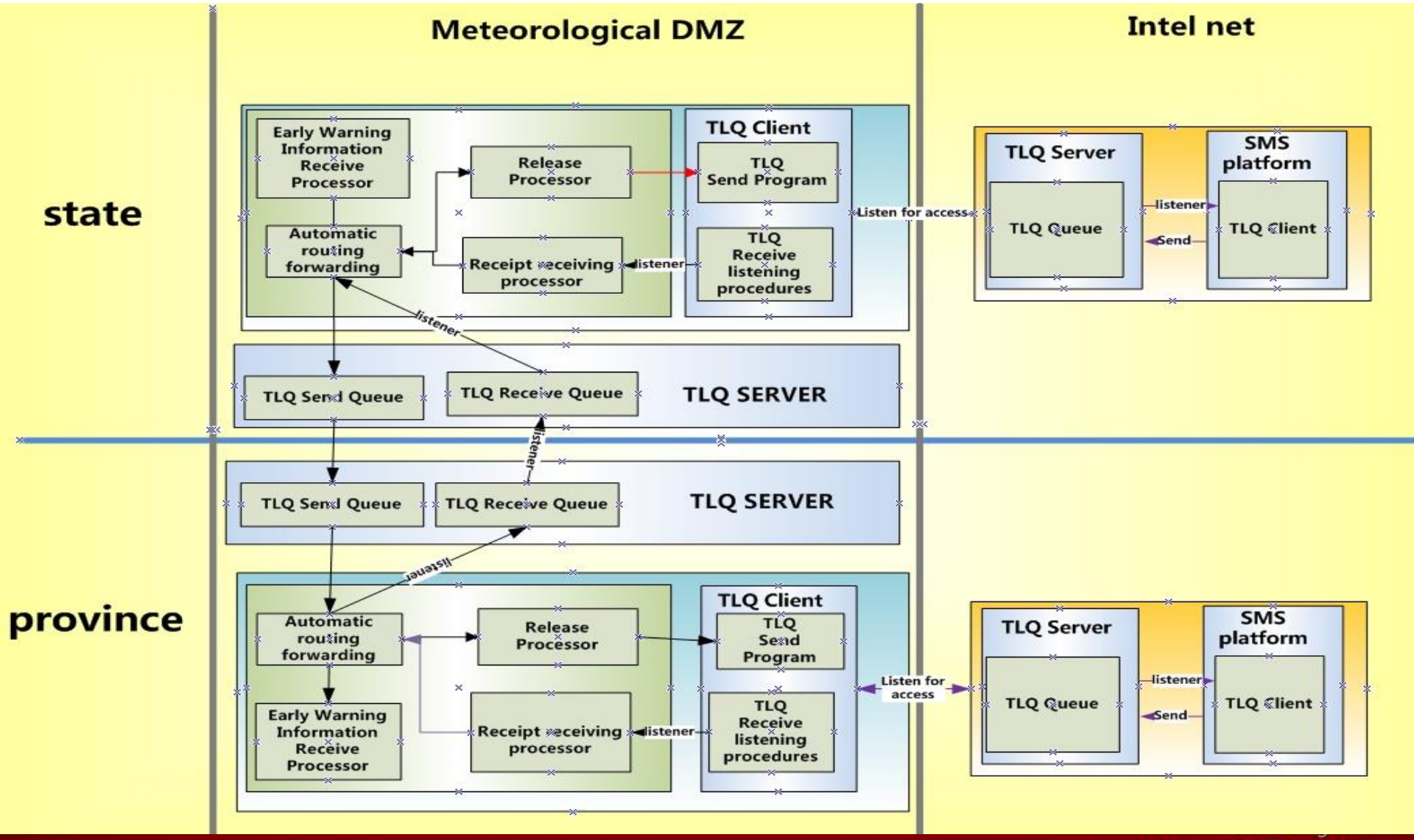
Docking with Earthquake Bulletin Sys

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



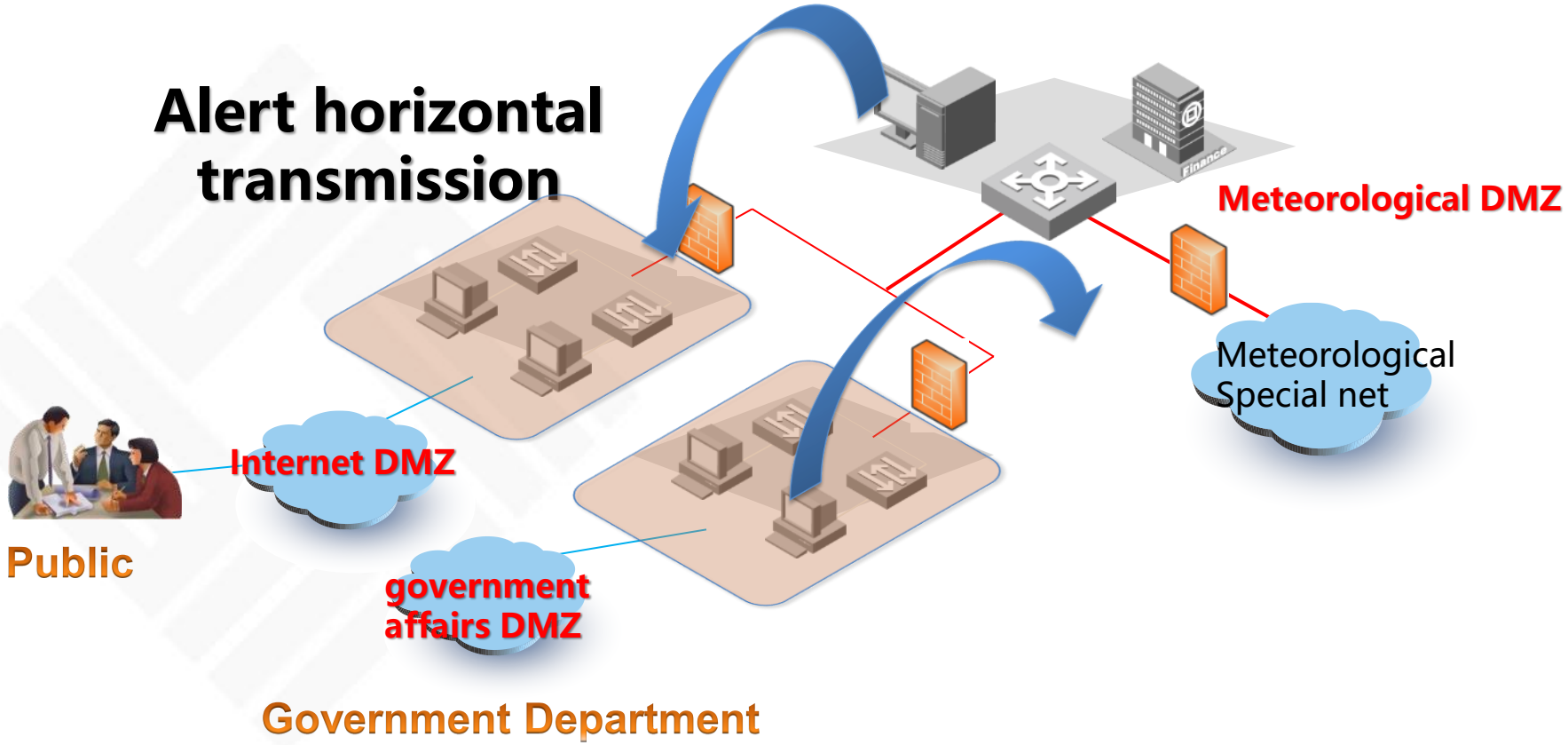

```
<identifier>00000041900001_20170814193526</identifier>
<sender>中国地震台网中心</sender>
<senderCode>00000041900001</senderCode>
<sendTime>2017-08-14 19:35:26+08:00</sendTime>
<description>
08月14日19时26分在新疆阿克苏地区库车县（北纬41.29度，东经83.74度）
发生4.5级地震，震源深度7千米。</description>
<areaDesc>新疆阿克苏地区库车县</areaDesc>
<circle>83.74,41.29,80000</circle>
```

message-oriented middleware(TLQ)



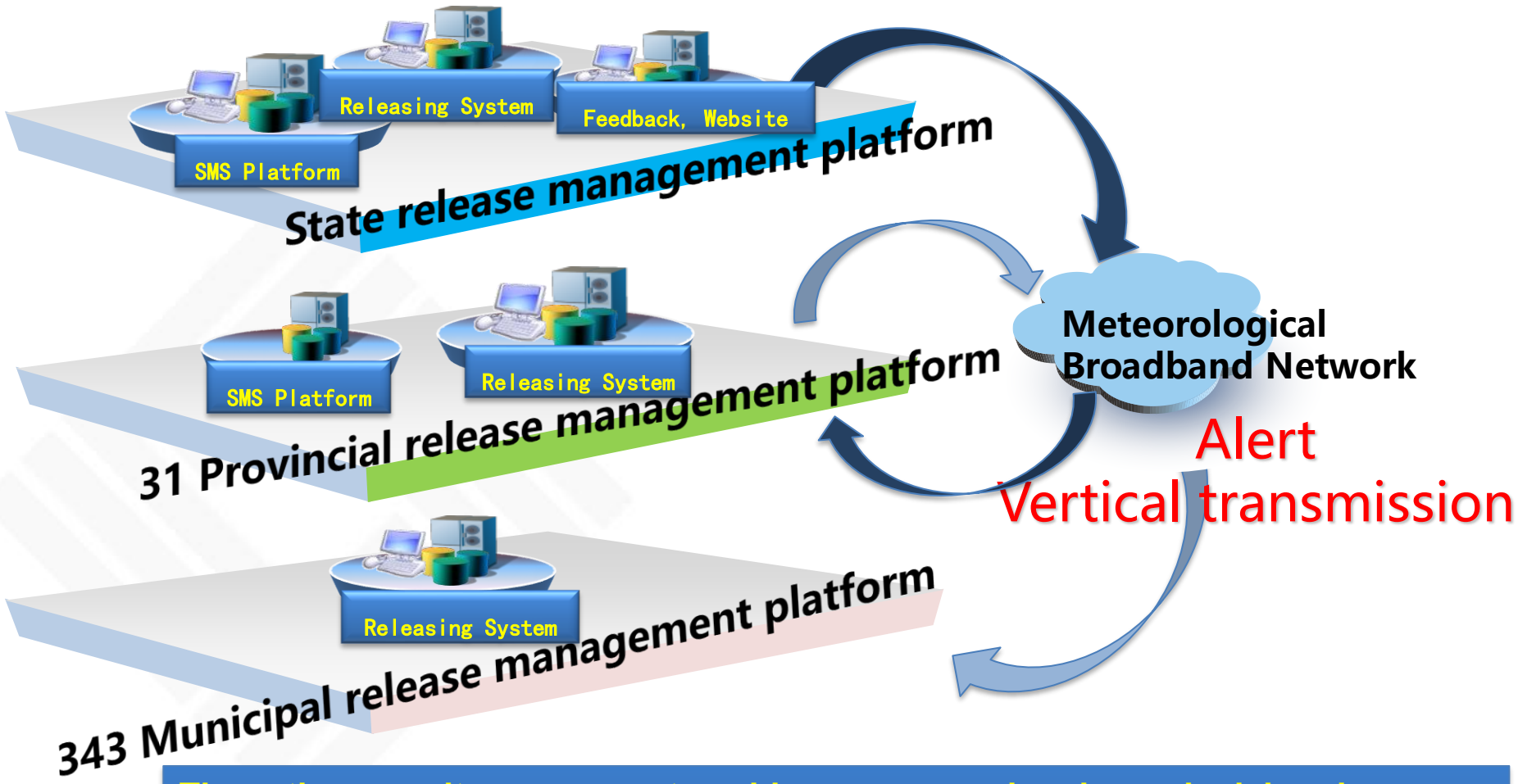
Warnings horizontal transmission

Transfer safe	Trail Record	Unified standard	Multiple method



Vertical transmission between the three-level platform

Reliable transmission of information	Trackable life cycle	Unified standard, flexible configuration	Release channel flexible configuration

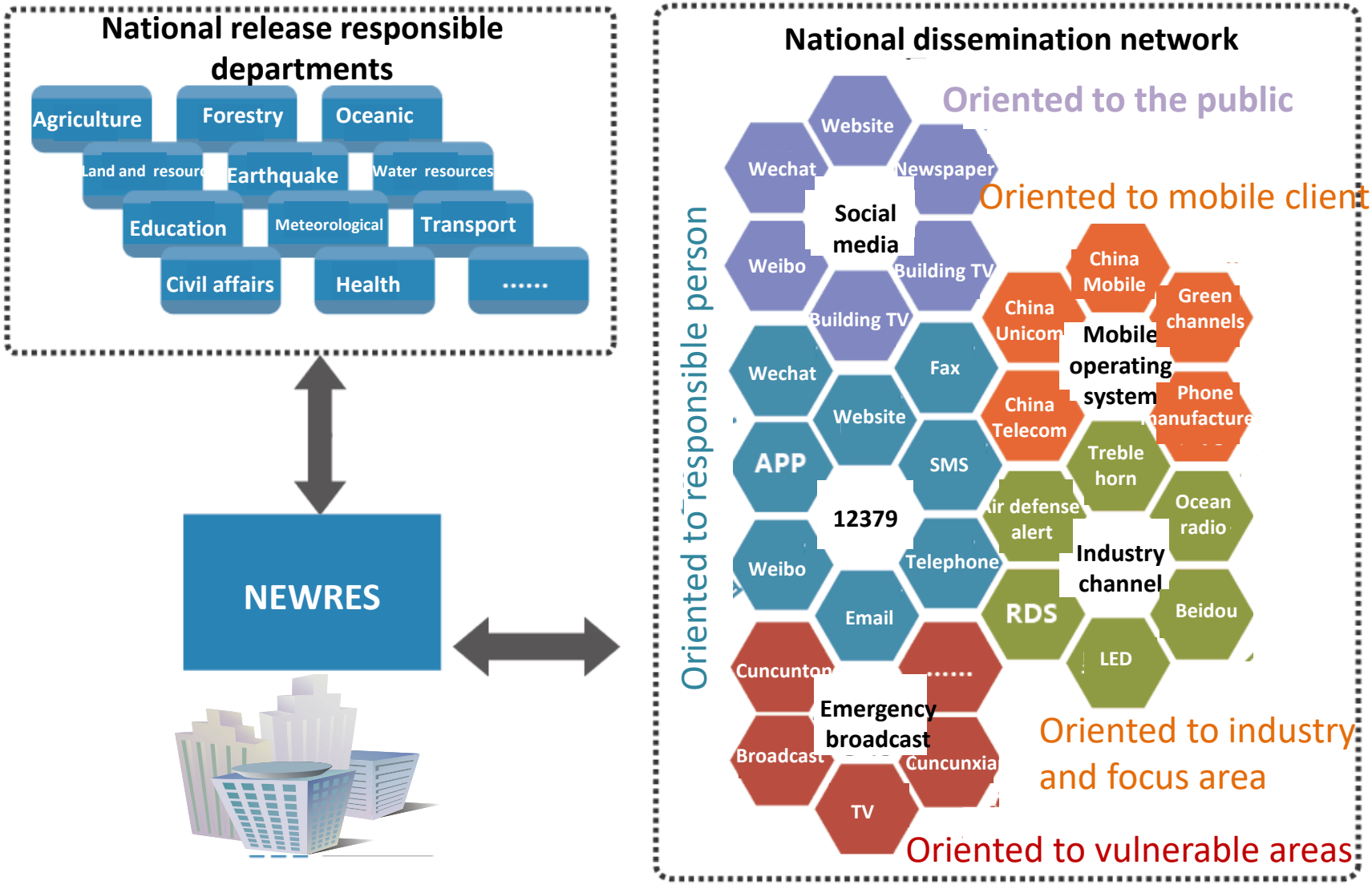


Three-tier security measures to achieve cross-regional, provincial and municipal point-to-point secure transmission

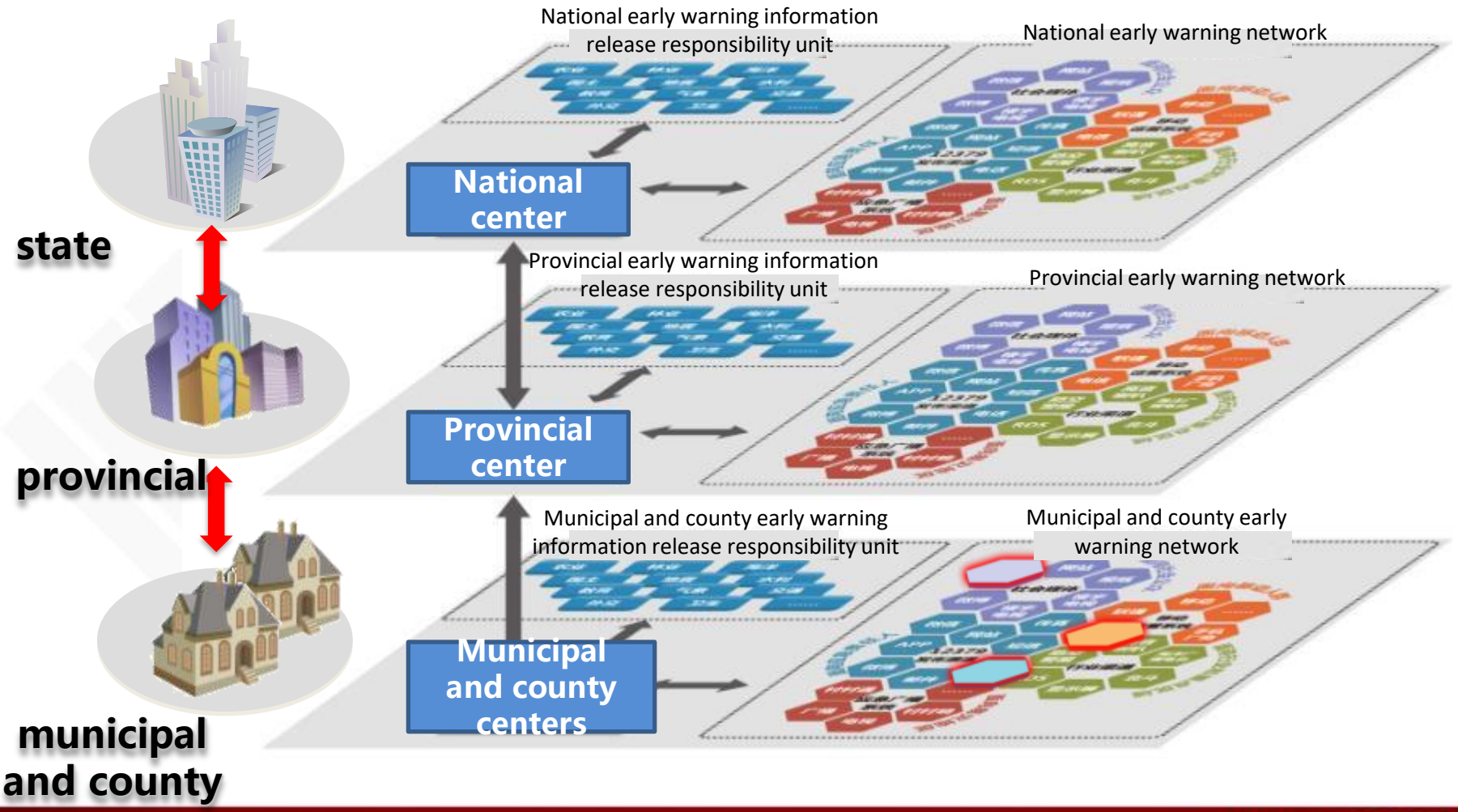
Provide overall solutions and service

1. Qmnimedia 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

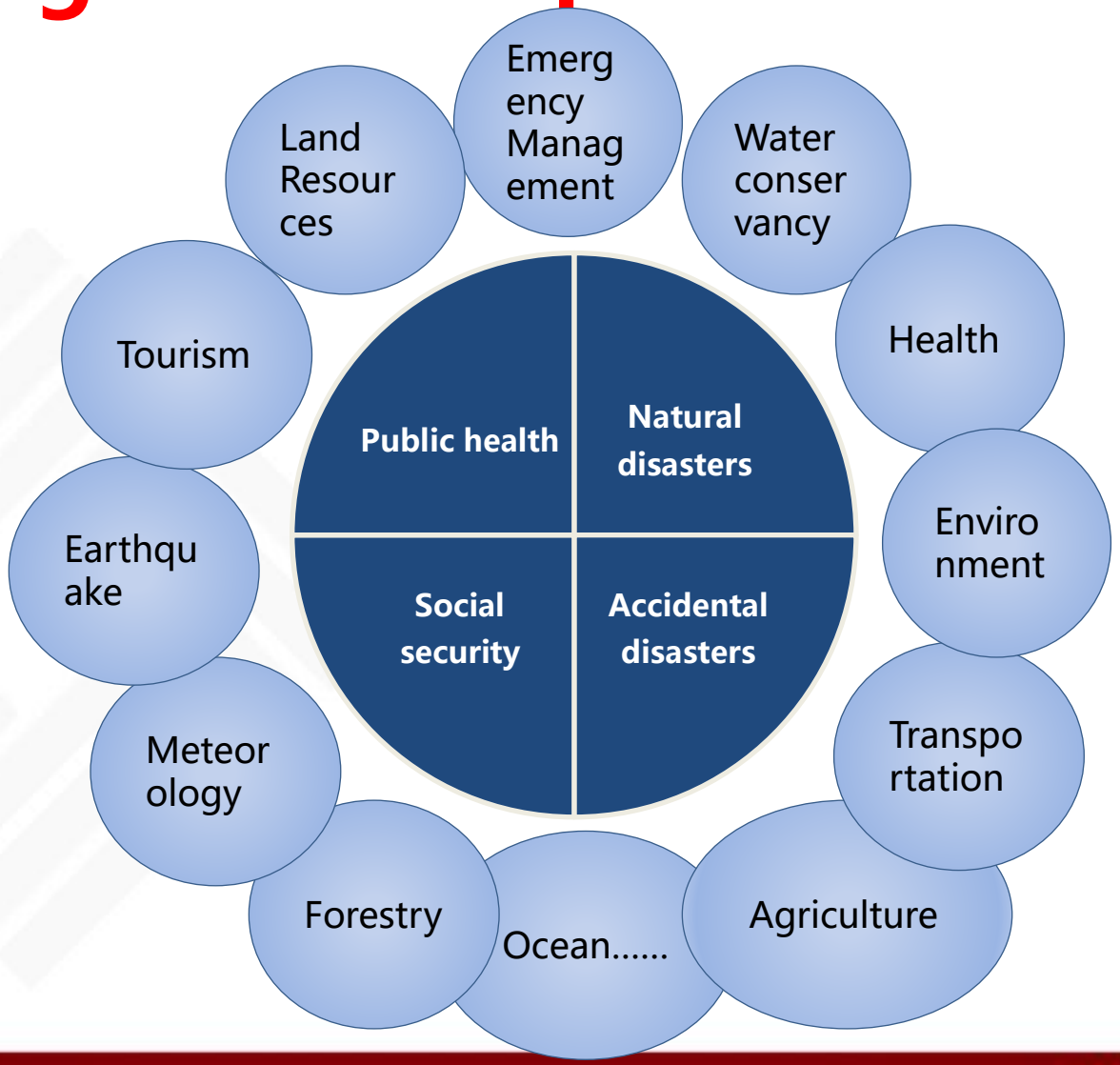
1. omnimedia release of early warning



2. Rapid release to the designated area via entire network

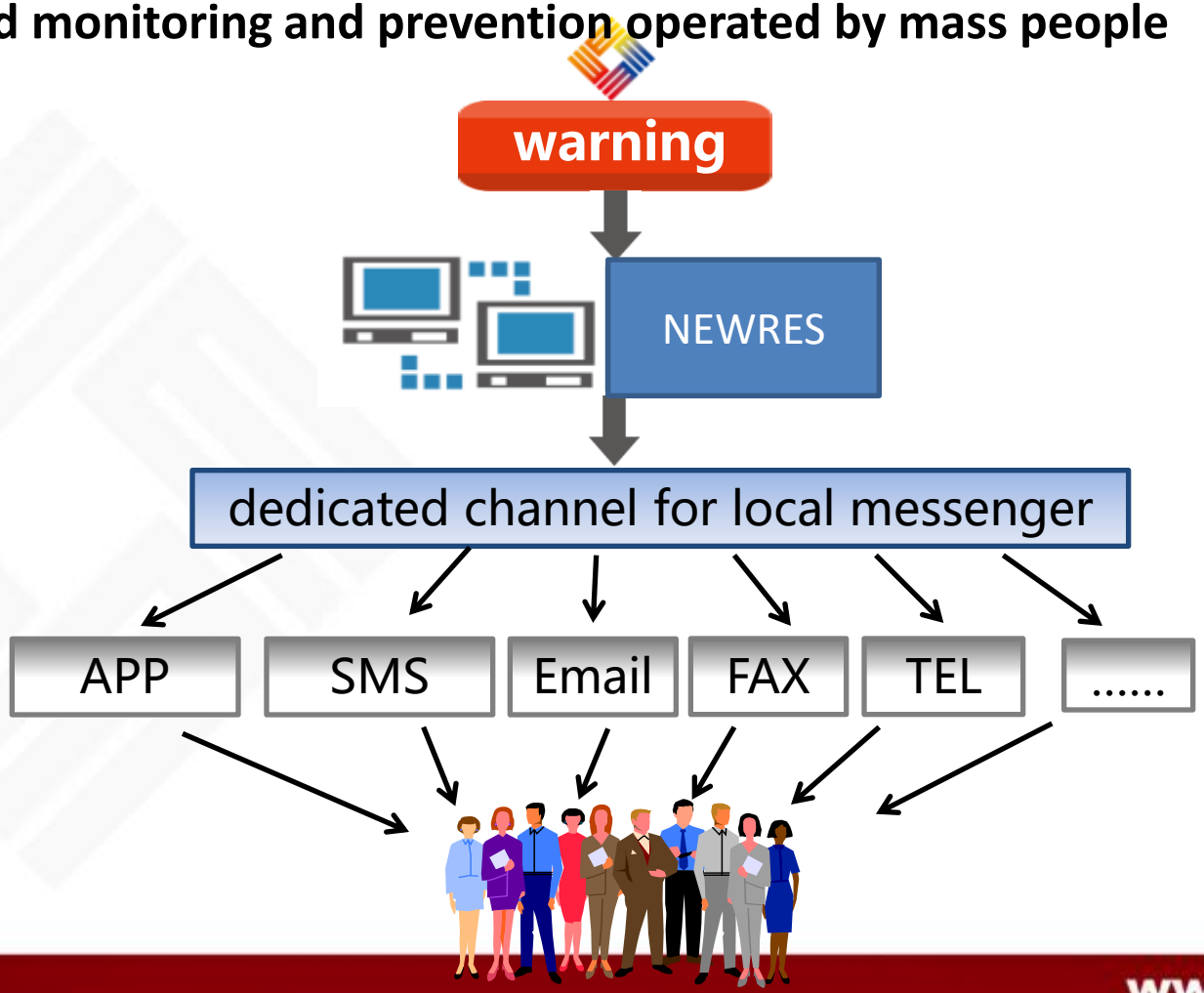


3. barrier-free sharing of early warning across departments



4. dedicated channel for local emergency messenger

Fast and accurate warning release to 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 massagers reception, the public and geographical coverage, the effective number of terminal equipment of each early warning

Overall process

Live image and public opinions

Release situations

100% TV

90% internet

100% broadcast

95% loudspeaker

SMS

Early warnings

warning types

warning levels

warning contents

print documents

Leader approval

System approval

Approval documents

Warning release

Quick report

Track, feedback

Analyze, summarize

Generate analysis report

Releasing department

NEWRES real-time monitoring platform

- Monitoring the operation of NEWRES, the releasing processes, the releasing pattern .
- The real-time disaster situation.
- Response action.

6、warning release security assurance

- 24/7 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

Contents

Deployment and application scale

1 national center(D)

31 provincial center(D)

343 municipal center(D)

2015 county center(A)

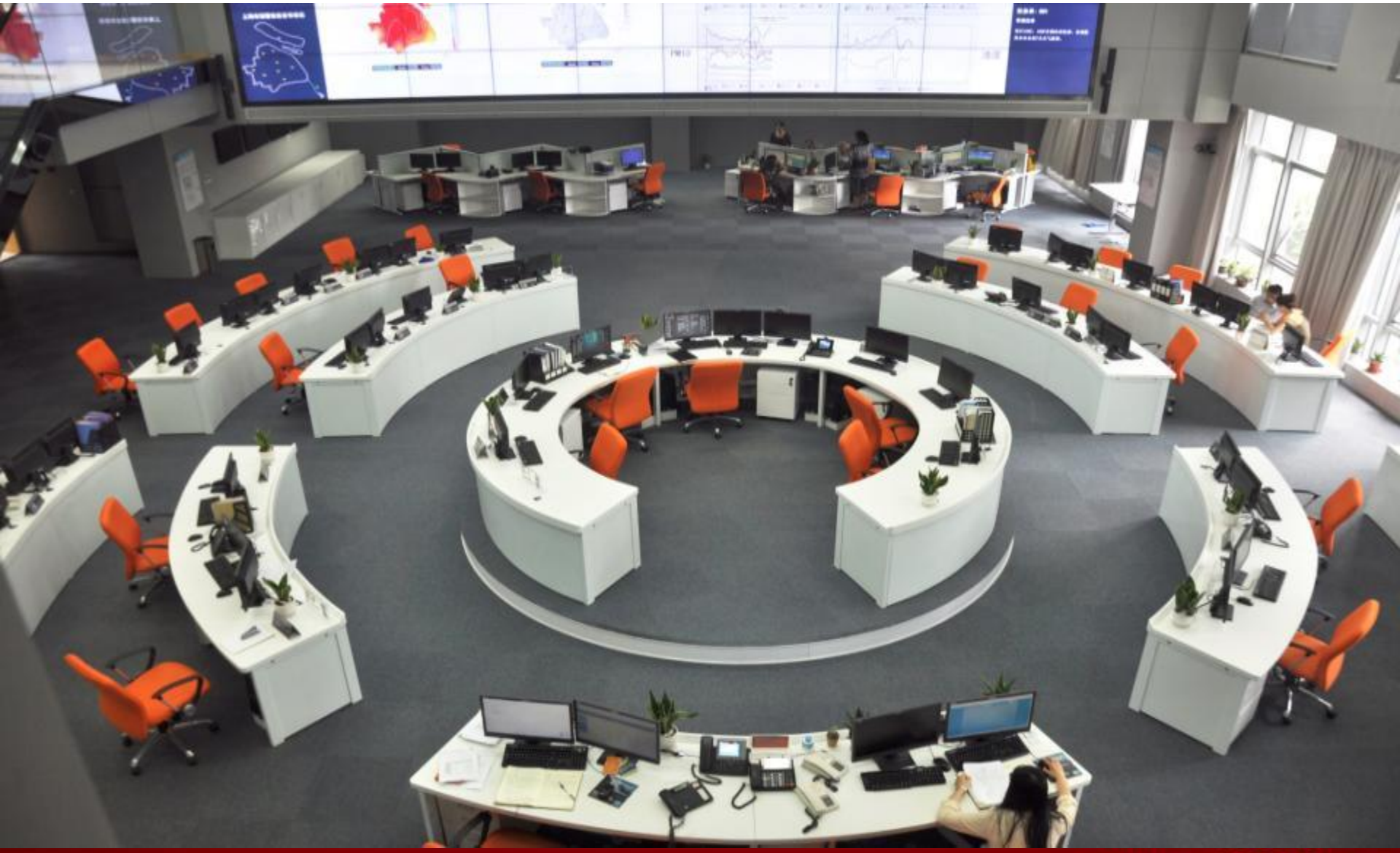
10126 specialty staff

National Early Warning Center

国家预警信息发布中心
National Early Warning Center

国家预警信息发布中心
National Early Warning Center

Shanghai Early Warning Center

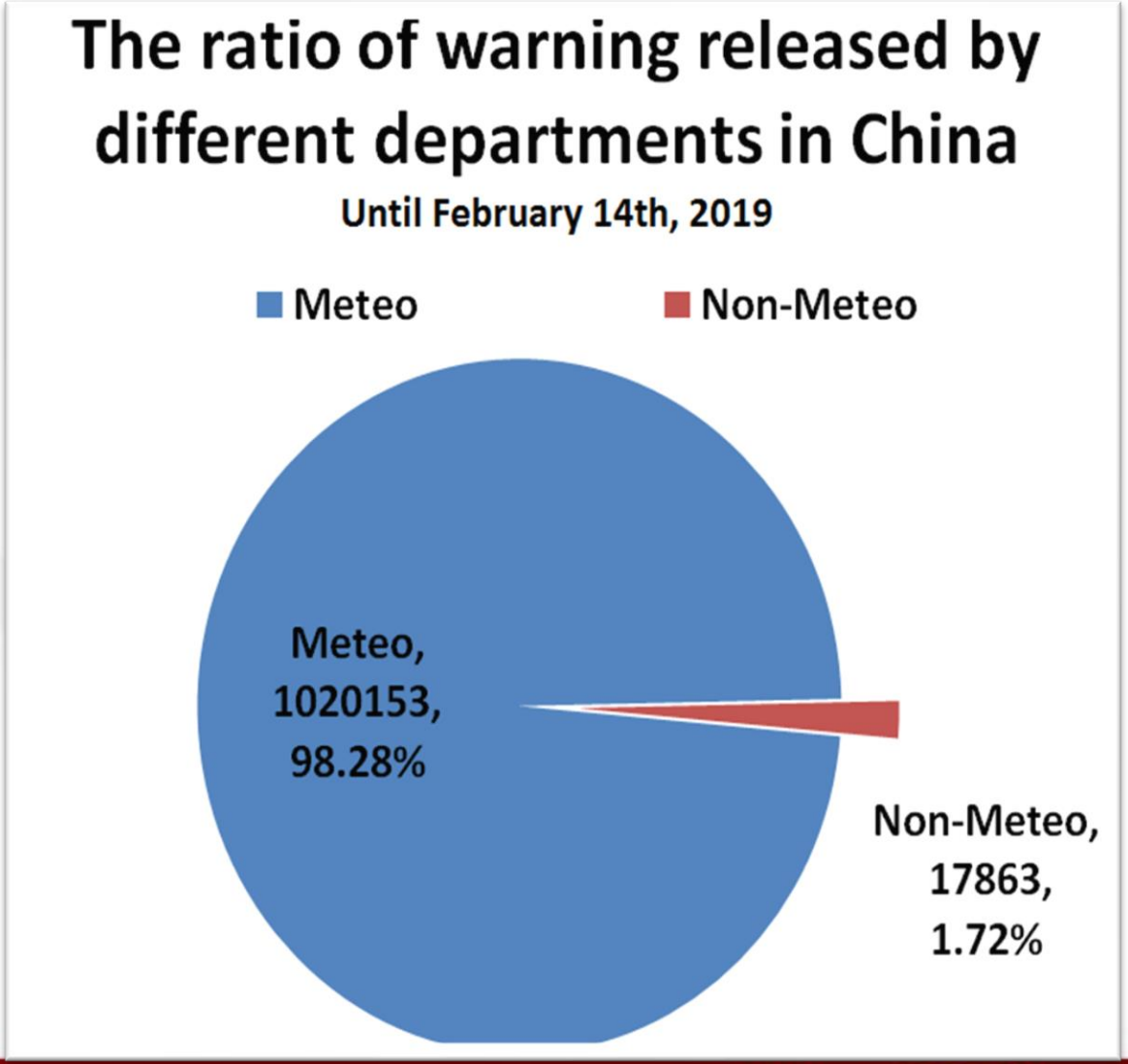


国家预警信息发布中心
National Early Warning Center

Panyu（county) Early Warning Center

Warnings from different department

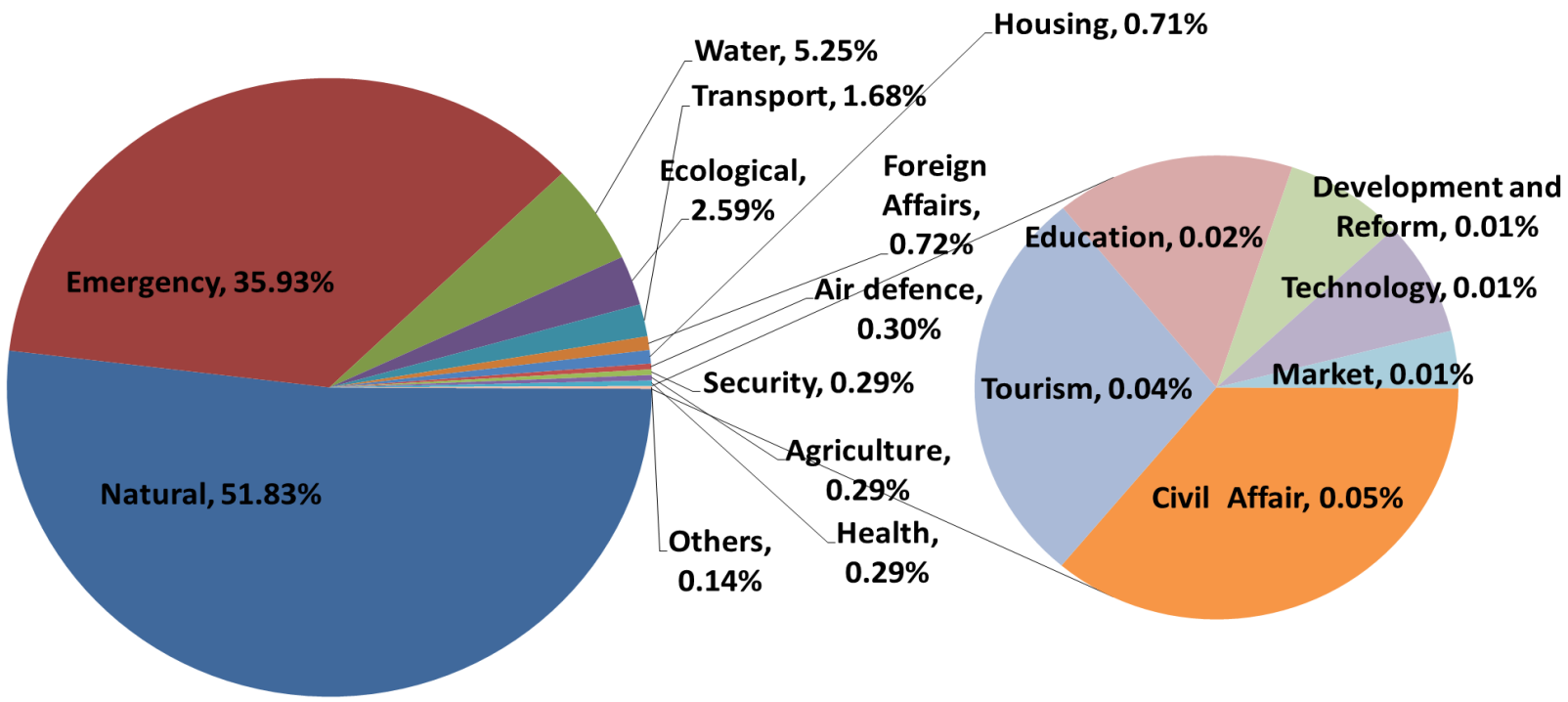
Until February 14th, 2019, a total of **1.03 million** early warning information had been issued through NEWRES



Warnings from different department

The situation of warning released by non-meteorological

Until February 14th, 2019



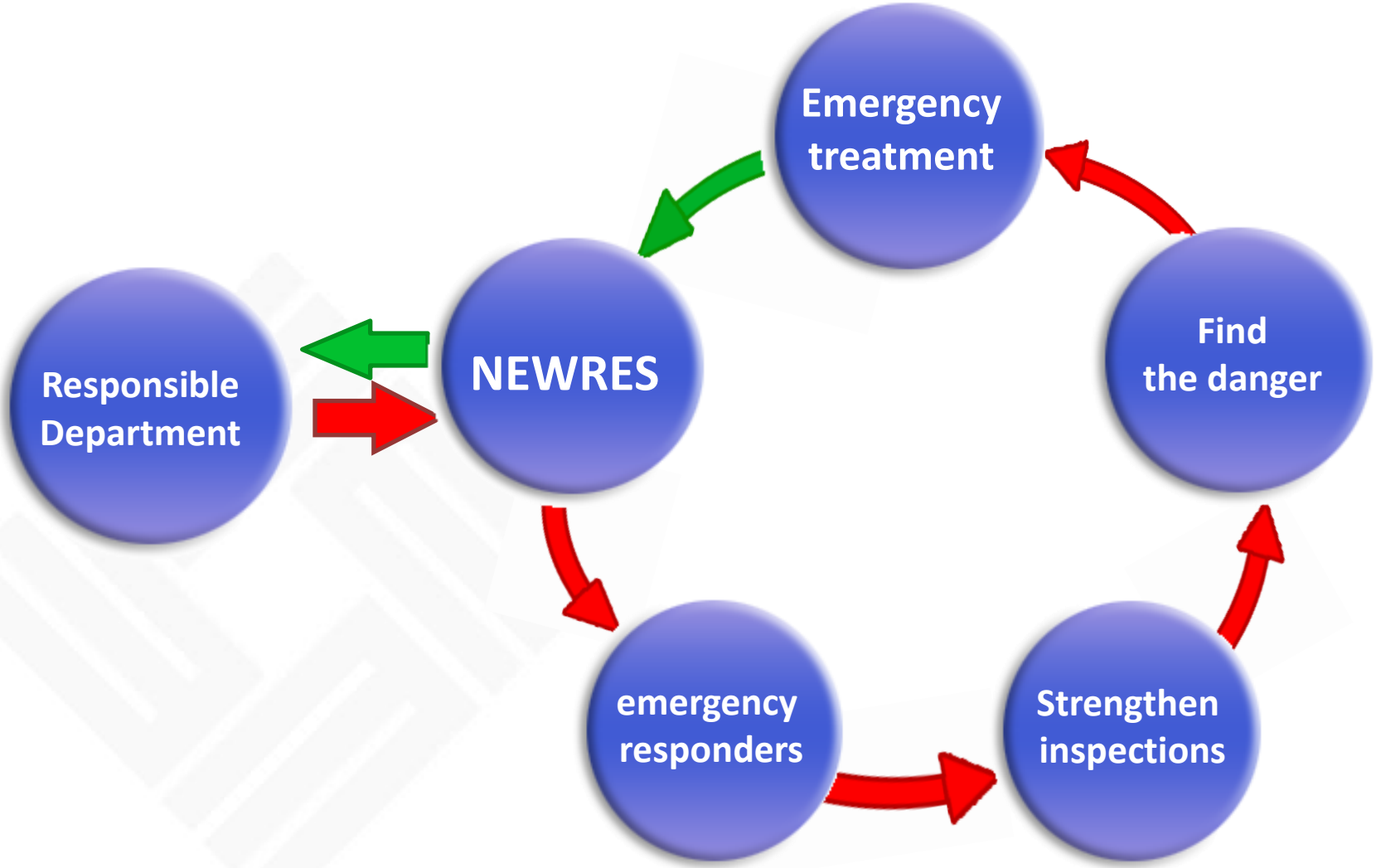
Information Service Interface

- The interface have been available since 2017.
- The interface provides 15 functions in 2 categories.
- The interface serviced 65 users and provided 27 million times in 2018.

Case Study

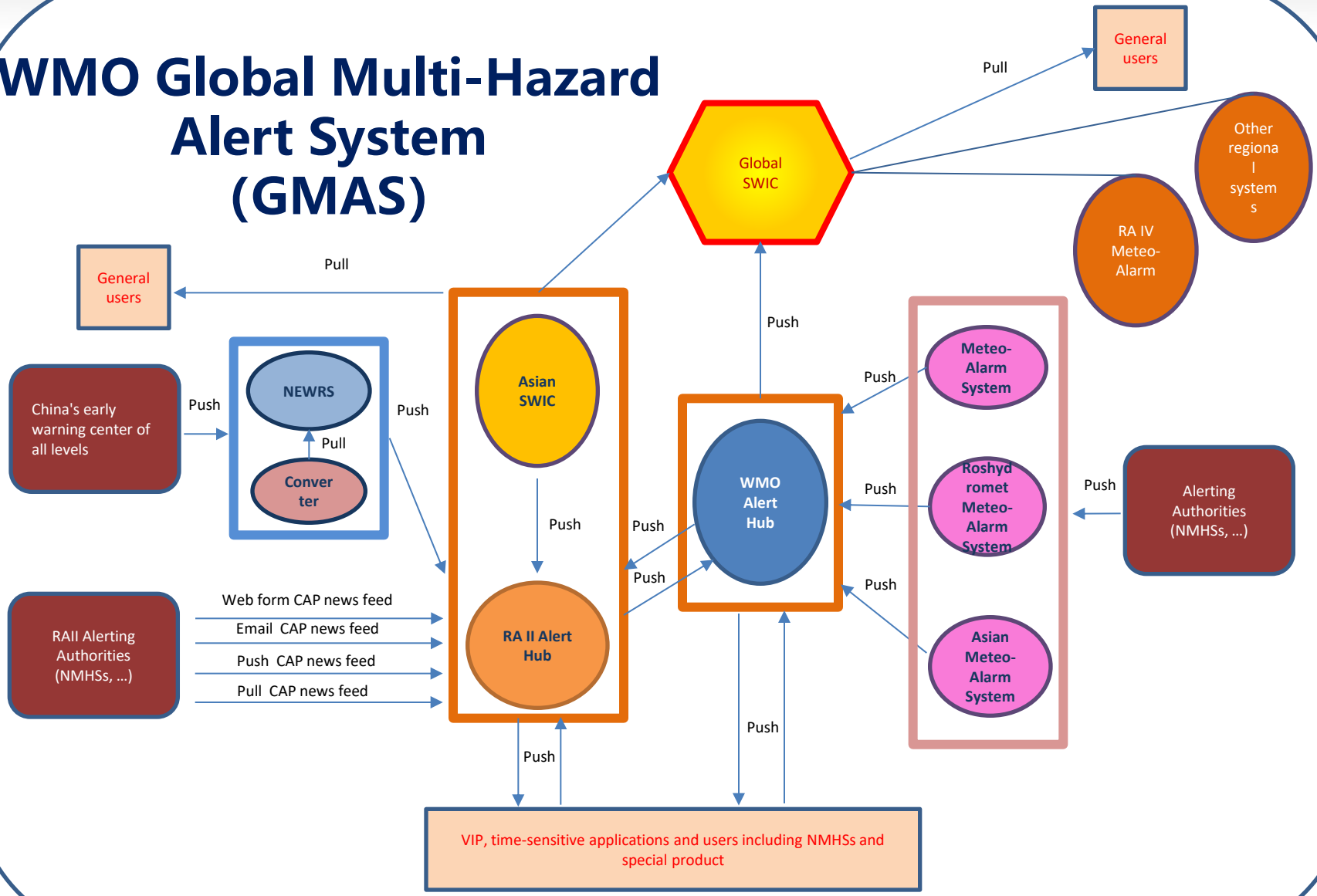
At about 8:30 on the morning of 11, **August 2018**, the **mountain collapsed** on Junhong Road, Da'anshan Town, Fangshan District, Beijing. About 30,000 square meters of rock fell down. Fortunately, **the local geological disaster group strengthened inspections after receiving early warning**, found dangers **10 minutes before** the mass collapse, and took prompt action quickly , thereby avoiding casualties.

Application and effectiveness



Contents

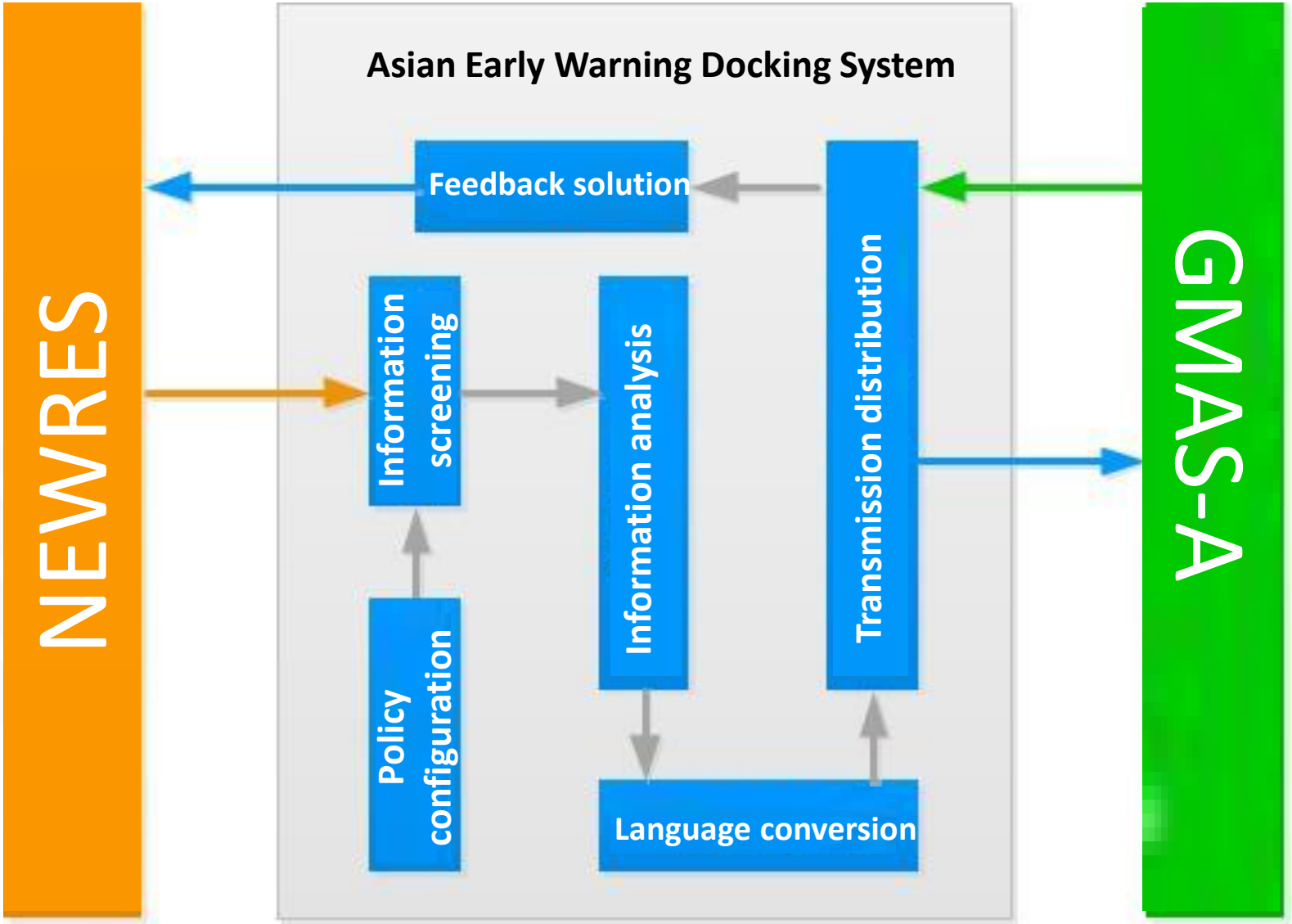
WMO Global Multi-Hazard Alert System (GMAS)



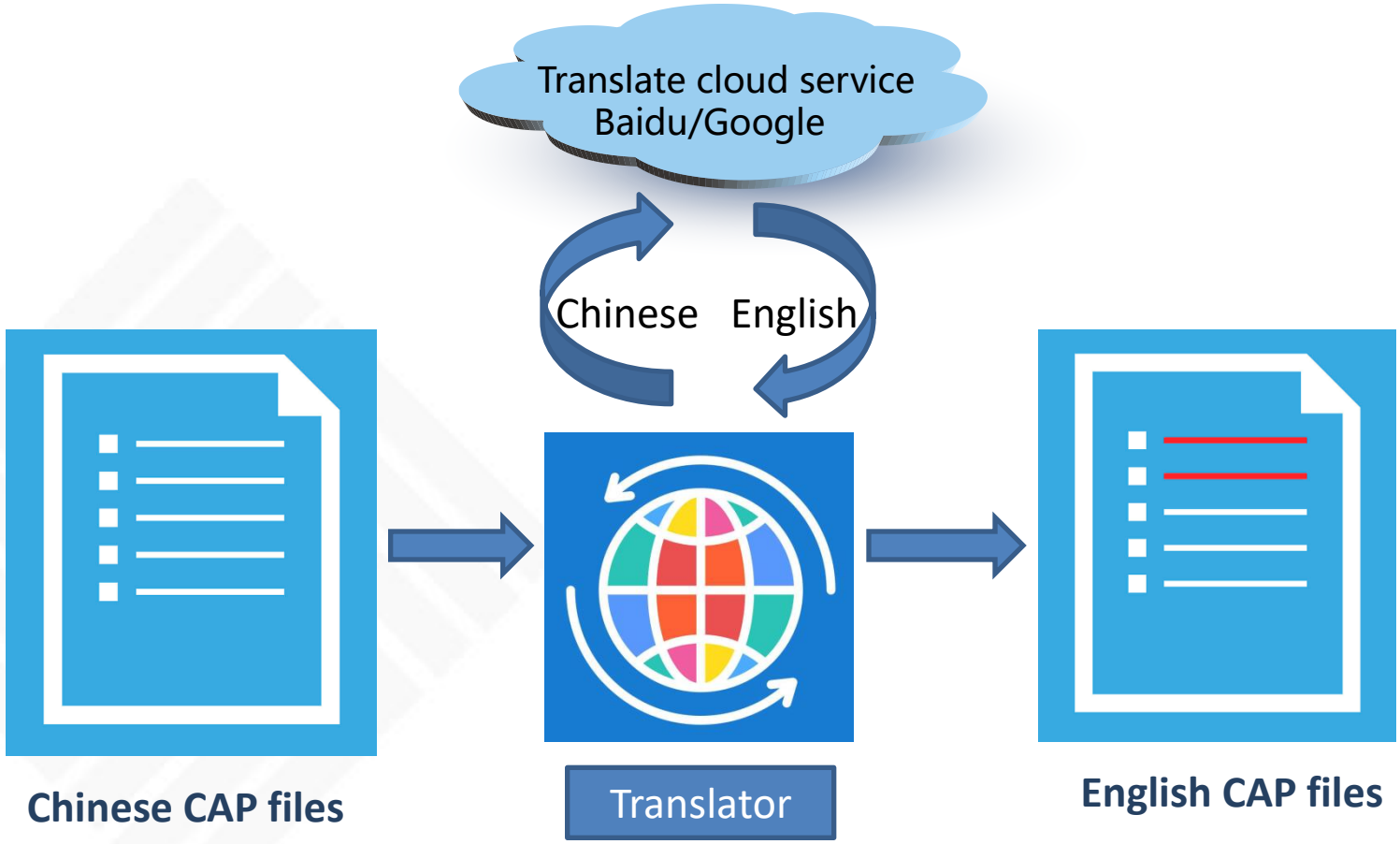
Global Multi-Hazard Alert System in Asia

- To establish a regional system, based on the implementation of CAP and the experience in WMO
- To provide assistance to relevant RAII members to improve operational capability in meteorological risk reduction
- CMA and HKO as co-coordinators

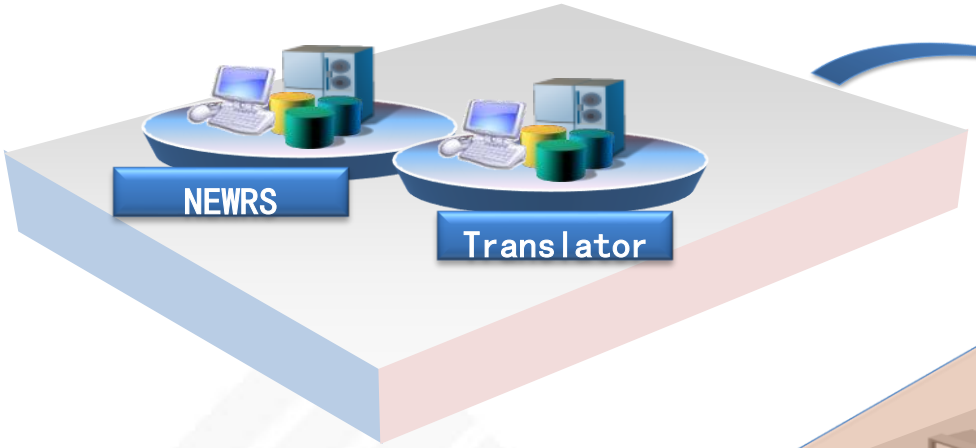
NEWRES connected to GMAS-A



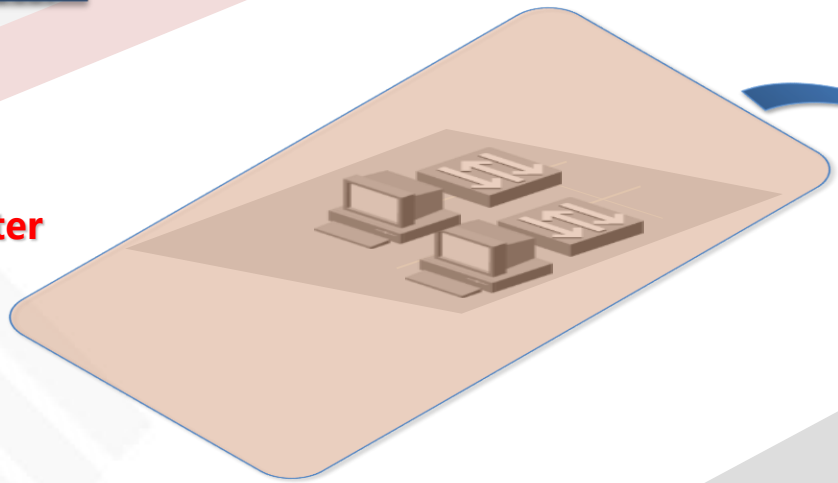
Translator Based on CAP



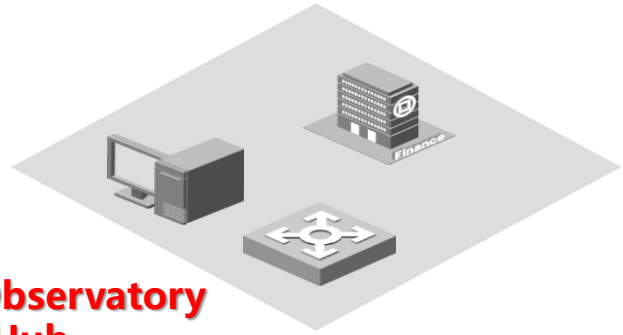
CAP Data Transfer Process



National Early Warning Center



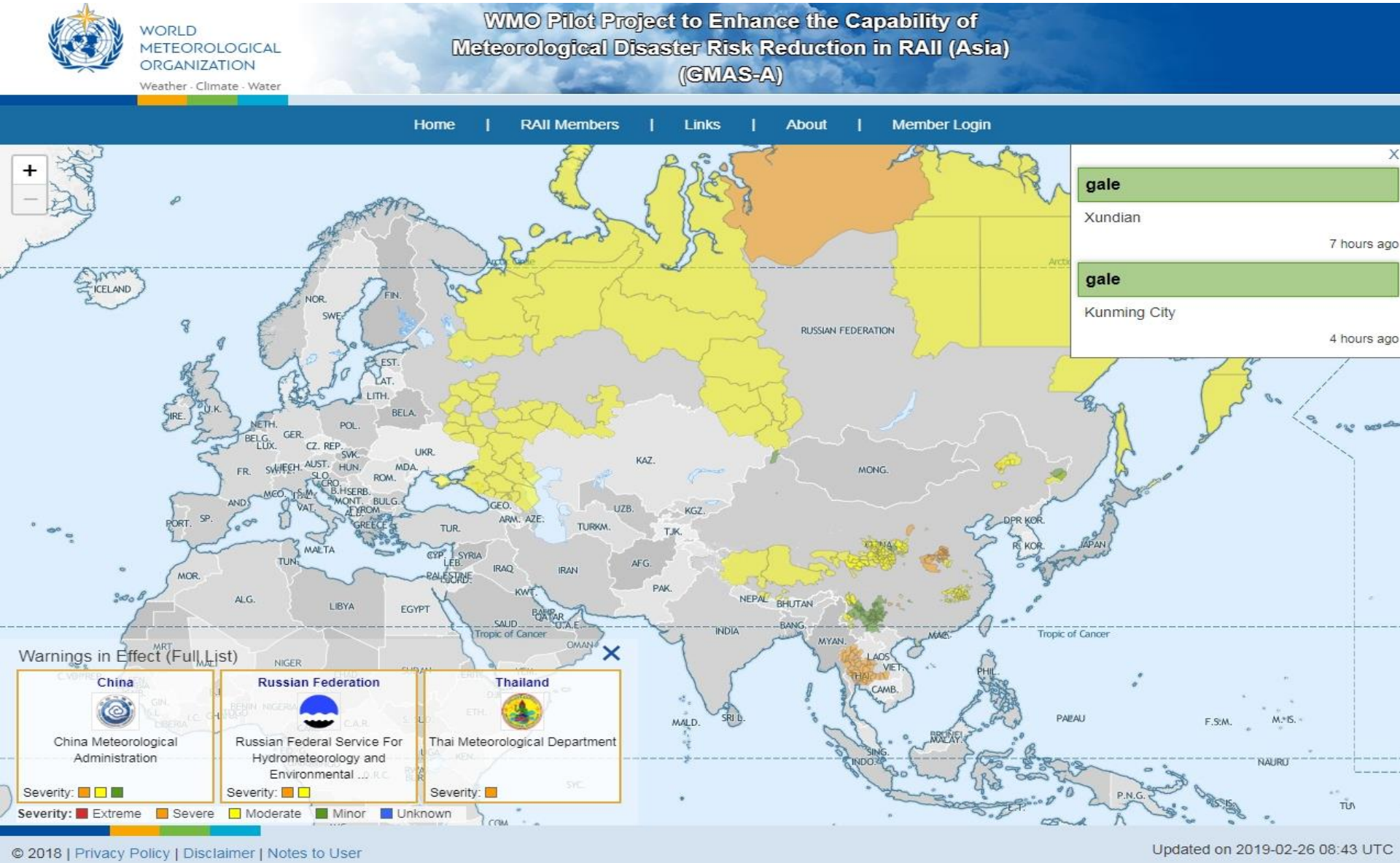
National Meteorological Information Center



Hong Kong Observatory
Alert Hub

http:// GMAS.ASIA/20190226

国家预警信息发布中心
National Early Warning Center




谢谢
thank you
danke
merci
obrigado
ngiyabonga
gracias
teşekkür ederim
спасибо
dank je
bedankt
dziękuję
go raibh maith agat
sukriya
kop khun krap
terima kasih
arigatō
dakujem
grazie
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감사합니다
ありがとう
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