

Introduction of Sichuan Surveying and Mapping Emergency System

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Background

Sichuan province is one of the most serious provinces in China which suffered from the natural disasters deeply.

various type
wide distribution
high frequency happen
heavy losses



2013 Lushan Earthquake



2013 Wulipo Landslide



2014 Kangding Earthquake

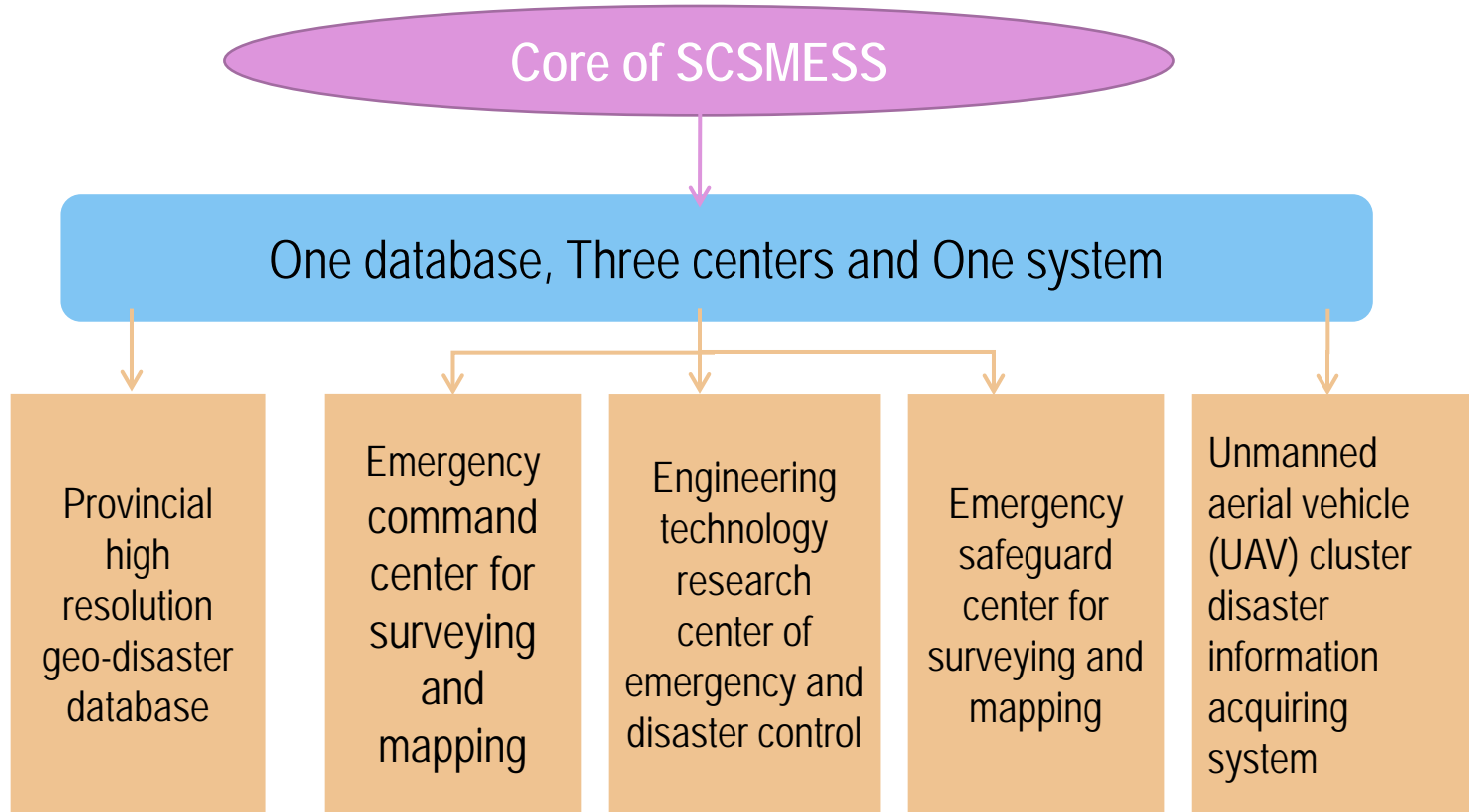


Background

Based on the urgent needs of geo-information and service for disaster, Sichuan Bureau of Surveying Mapping and Geoinformation (SCBSM) started to establish an emergency service system for surveying and mapping (SCESS), and regards this as the focus point to serve provincial government.

From 2011 to 2015, SCBSM has got 650 million Yuan from Sichuan provincial government for fundamental surveying and mapping work, and used 140 million Yuan of the funds for emergency service system construction.

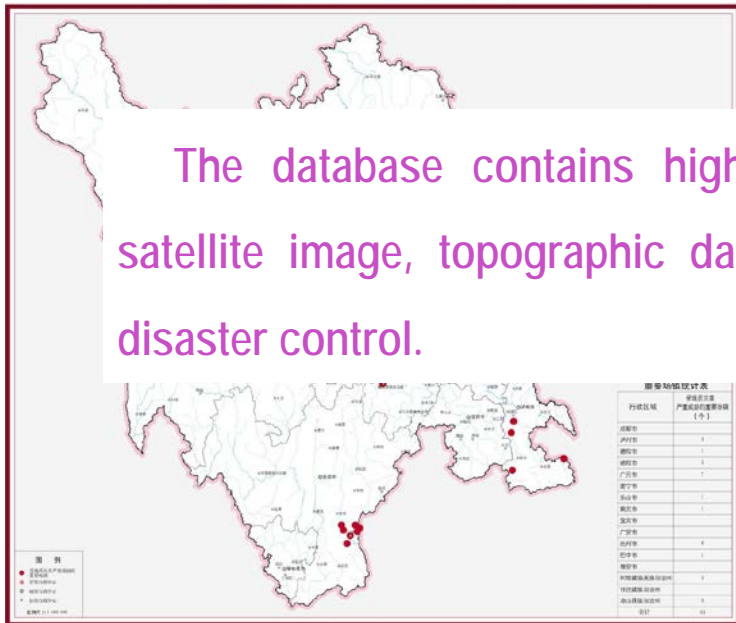
Core of SCSMESS



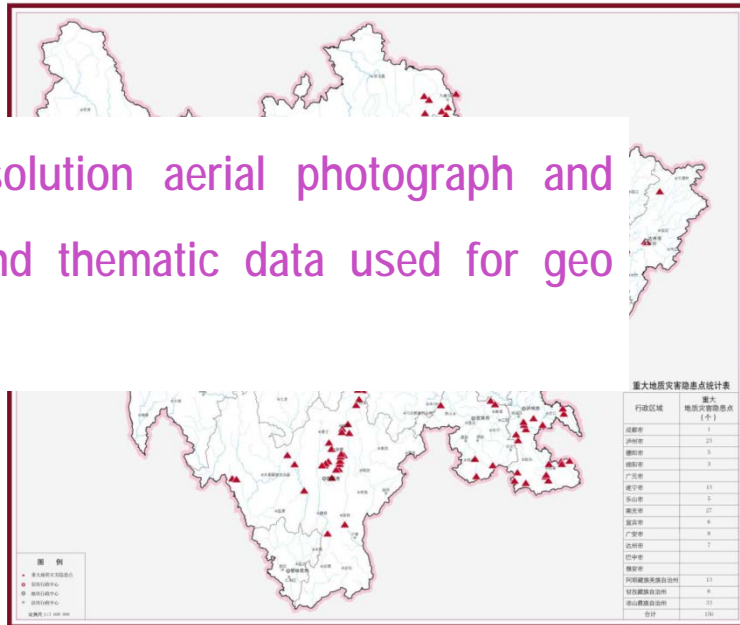
1

Provincial high resolution geo-disaster control database

四川省受地质灾害严重威胁的重要场镇(第一批)分布图



四川省重大地质灾害隐患点(第一批)分布图



The database contains high resolution aerial photograph and satellite image, topographic data and thematic data used for geo disaster control.

2

Sichuan Emergency Command Center for Surveying and Mapping

This is the first time for a provincial surveying and mapping organization to build emergency command center in the country.





2

Sichuan Emergency Command Center for Surveying and Mapping

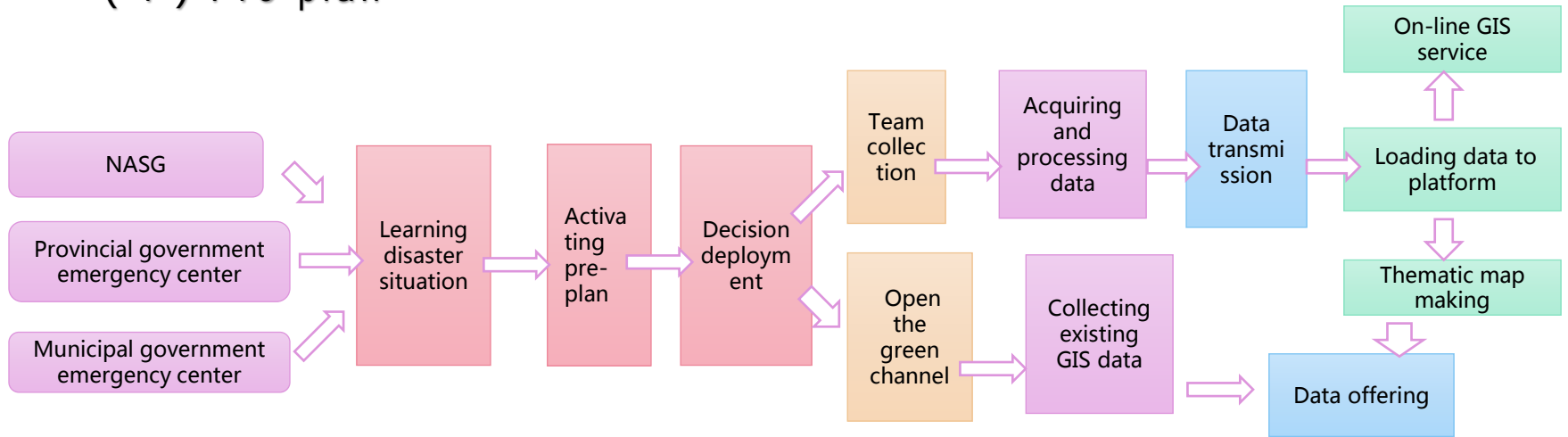
To support emergency command, SCBSM has developed

1. An emergency response pre-plan
2. A coordinated response mechanism
3. An emergency guarantee team
4. A geoinformation command platform.

2

Sichuan Emergency Command Center for Surveying and Mapping

(1) Pre-plan

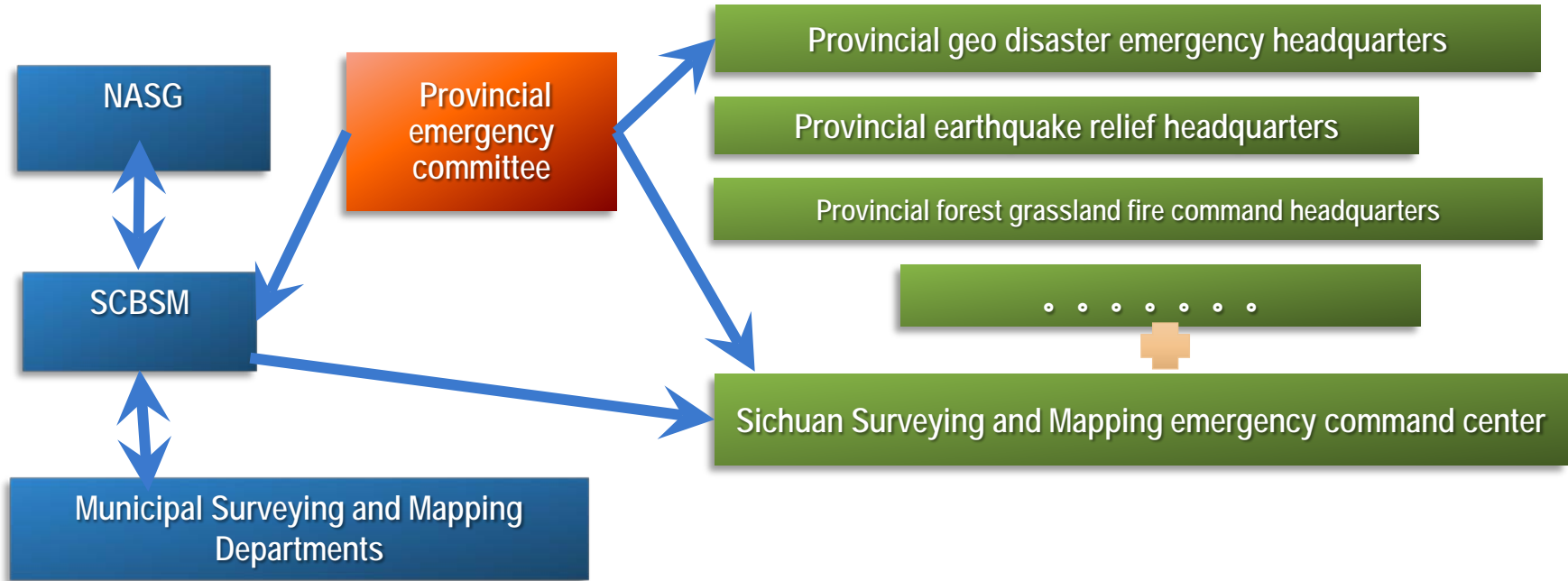


Procedure of emergency service work

2

Sichuan Emergency Command Center for Surveying and Mapping

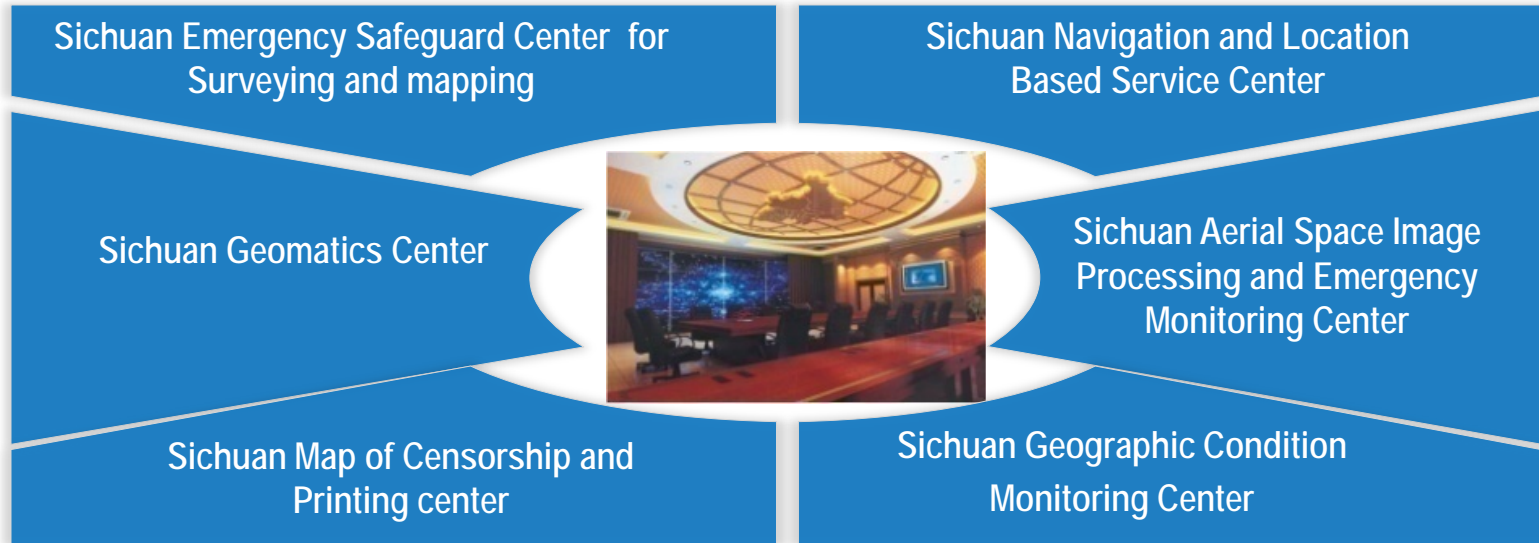
(2) Coordinated response mechanism



2

Sichuan Emergency Command Center for Surveying and Mapping

(3) Emergency guarantee team



2

Sichuan Emergency Command Center for Surveying and Mapping

(4) GIS Emergency Command Platform



2

Engineering Technology Research Center for Emergency and Disaster Control

Aim at International and national major demands on disaster prevention and reducing, resolve key technology and application engineering issues.



2

Emergency Safeguard Center for Surveying and Mapping





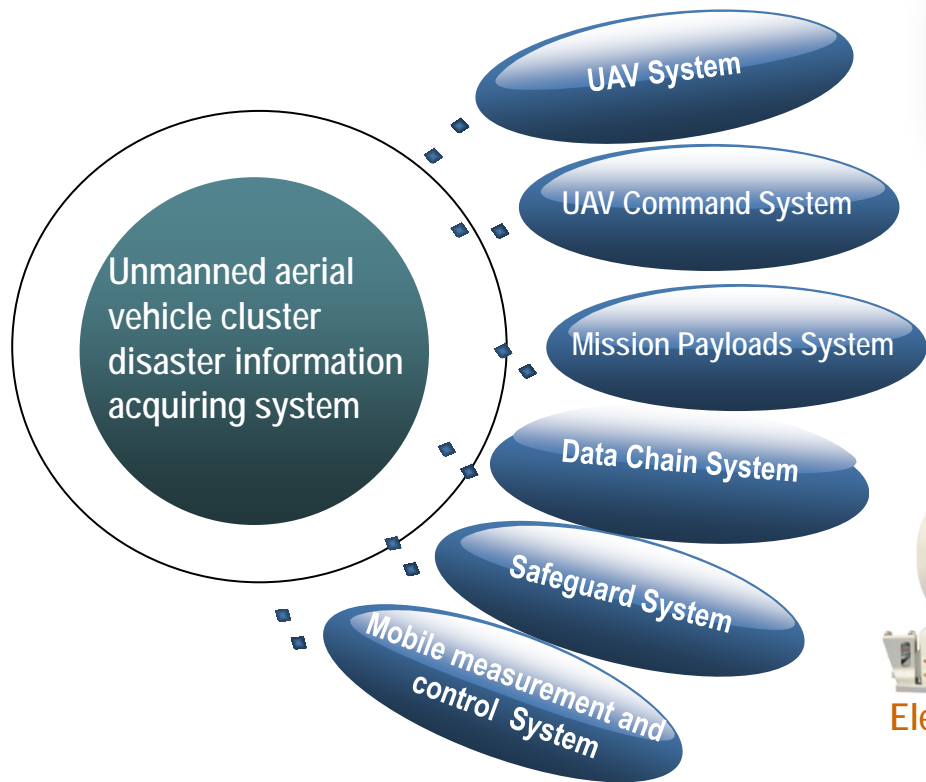
3

UAV Cluster Disaster Information Acquiring System

The system aims to acquire disaster information in a timely, efficiently, accurately and comprehensively way. It integrates Emergency Surveying and Mapping UAV Platform , 36 sets of multi dimension and multi source earth observation hardware, and 8 sets of software.

3

UAV cluster disaster information acquiring system



Z-5 UAV



DB-2 Plateau UAV



Mobile Surveying System



Electro-optical pod



Aerial camera



Challenges

1. Mechanism of coordinated emergency response
2. Data sharing and exchange.
3. Emergency service ability, including high quality team , advanced technology, methods and equipments in acquiring, processing and interpreting data, monitoring and forecasting disaster.

Future









Thank you!