

Integrating Space Assets for UK Civil Resilience



David Hodgson
Nov 2009

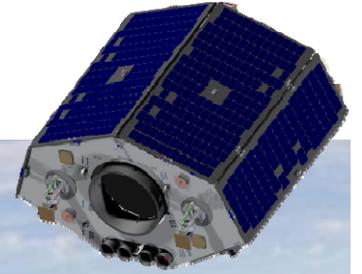


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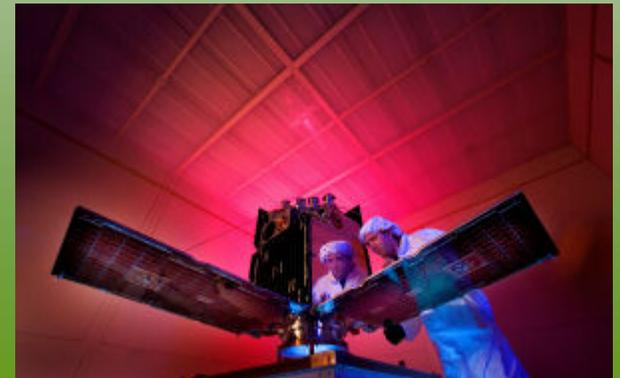
SSTL Group Company

EADS Astrium Group



SSTL Group:

- Formed 1985
- 350+ Employees
- 4 Major Facilities in UK
- US Office Denver, CO



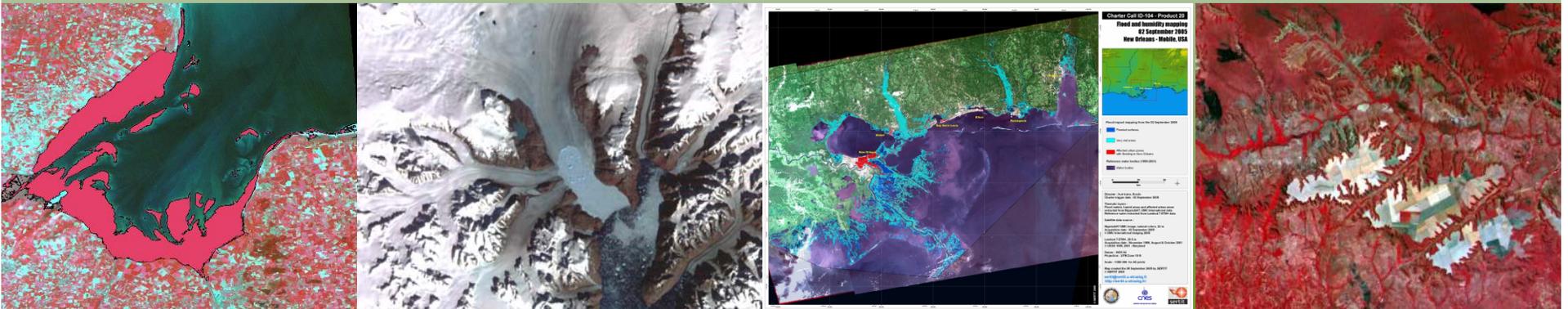
DMCii

...is a company dedicated to **'Global Daily Imaging'**.

We image and map human activity and natural events around the globe.

We enable nations, organisations and individuals to understand and manage the planet's resources and environmental change.

We sell products and services from earth observation satellites and coordinate our own unique satellite constellation called the DMC.



Satellite Imagery Services

Panchromatic

- 4 & 2.8 metre GSD
- Up to 24 x 4,100 km images
- Large dynamic range
- Levels 1 & 2



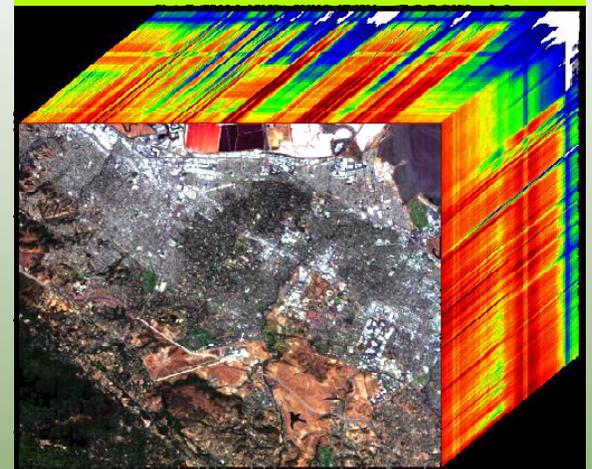
Multispectral

- GSD 32M, 22m (2008), 5m
- Up to 670 x 4,100 km images
- Daily Revisit
- RAW to L1T Ortho



Hyperspectral

- 18 metre GSD
- 64 Spectral bands
- Mutli-look angles
- Levels 1 & 2



Service

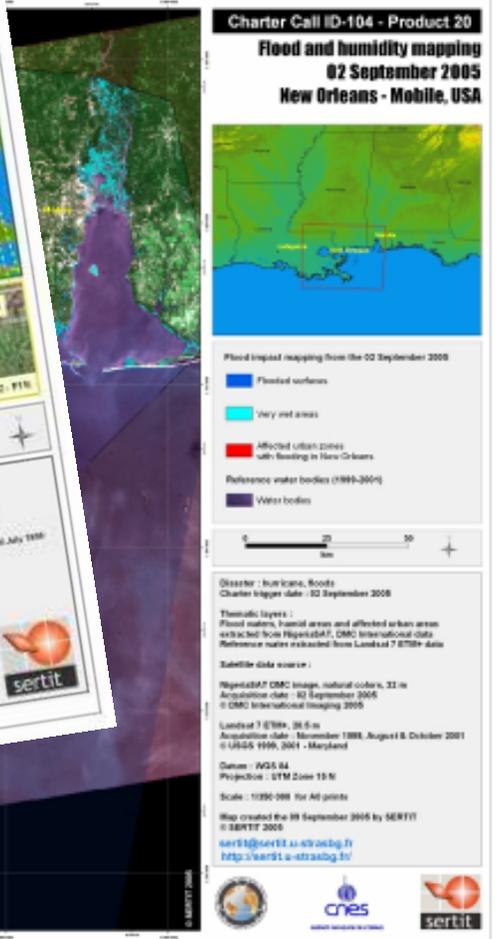
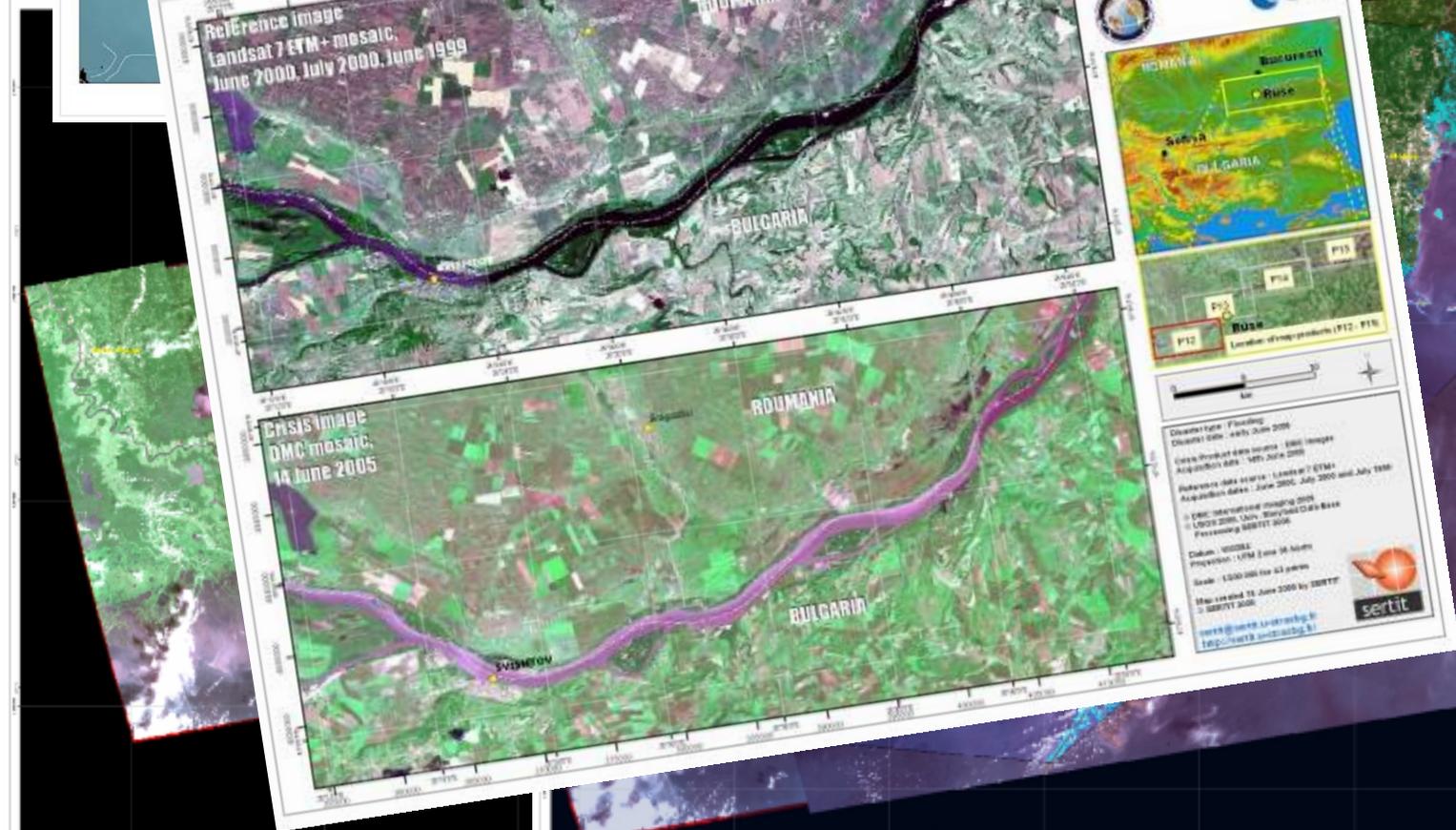
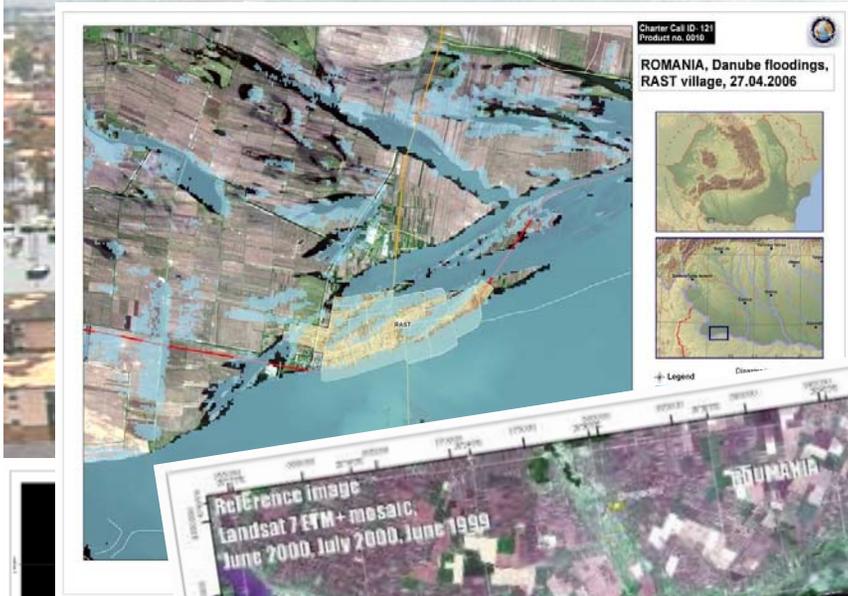
Forestry

Agriculture

Environment

**General
Mapping**

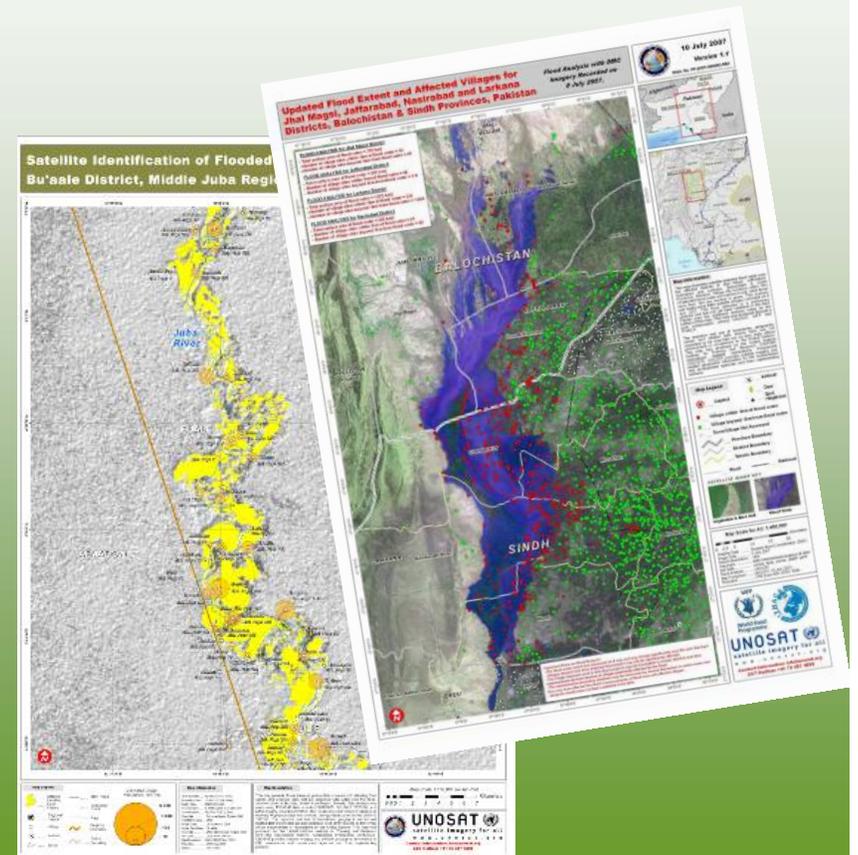
**Civil
Government**



Disaster Response: International Charter



- Typical Year (DMCii)
 - Approx. 30 Disasters responded to
 - Approx. 100 images (60% Delivered)
 - 2 months On 24/7 Call
 - Lead Agency with BNSC
 - International Synergy Activity
 - Charter Access (Africa)

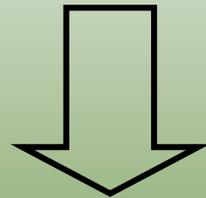


UK Resilience

“The Government's aim is to reduce the risk from emergencies”

UK Resilience homepage

- Preparedness
- Response & Recovery



 **Cabinet**Office

Integrating Space Assets for UK Civil Resilience



User Community

Tier 1 Users
Policy and National
Service Deliverers

Tier 2 Users
Regional Resilience Teams

Tier 3 Users
Local and Regional
Service Deliverers

Backbone User Cabinet Office – Civil Contingencies Secretariat

Government Departments

- Home Office
- Ministry of Justice
- Foreign and Commonwealth Office
- Department for Environment, Food and Rural Affairs
- Department for Transport
- Ministry of Defence
- Department of Health
- Department for Business, Enterprise and Regulatory Reform
- HM Treasury
- Department for Communities and Local Government
- Scotland Office
- Northern Ireland Office
- Wales Office

Government Agencies

- Environment Agency
- Maritime and Coastguard Agency
- Health Protection Agency
- Security Service
- Health and Safety Executive

Devolved Administrations

- Scottish Executive
- National Assembly for Wales
- Northern Ireland Office

National Centres

- UK Flood Alert Centre
- Met Office

Government Office for

- the North West
- the North East
- Yorkshire and The Humber
- the West Midlands
- the East Midlands
- the East of England
- the South West
- the South East
- London

Public Sector Practitioner

Representatives

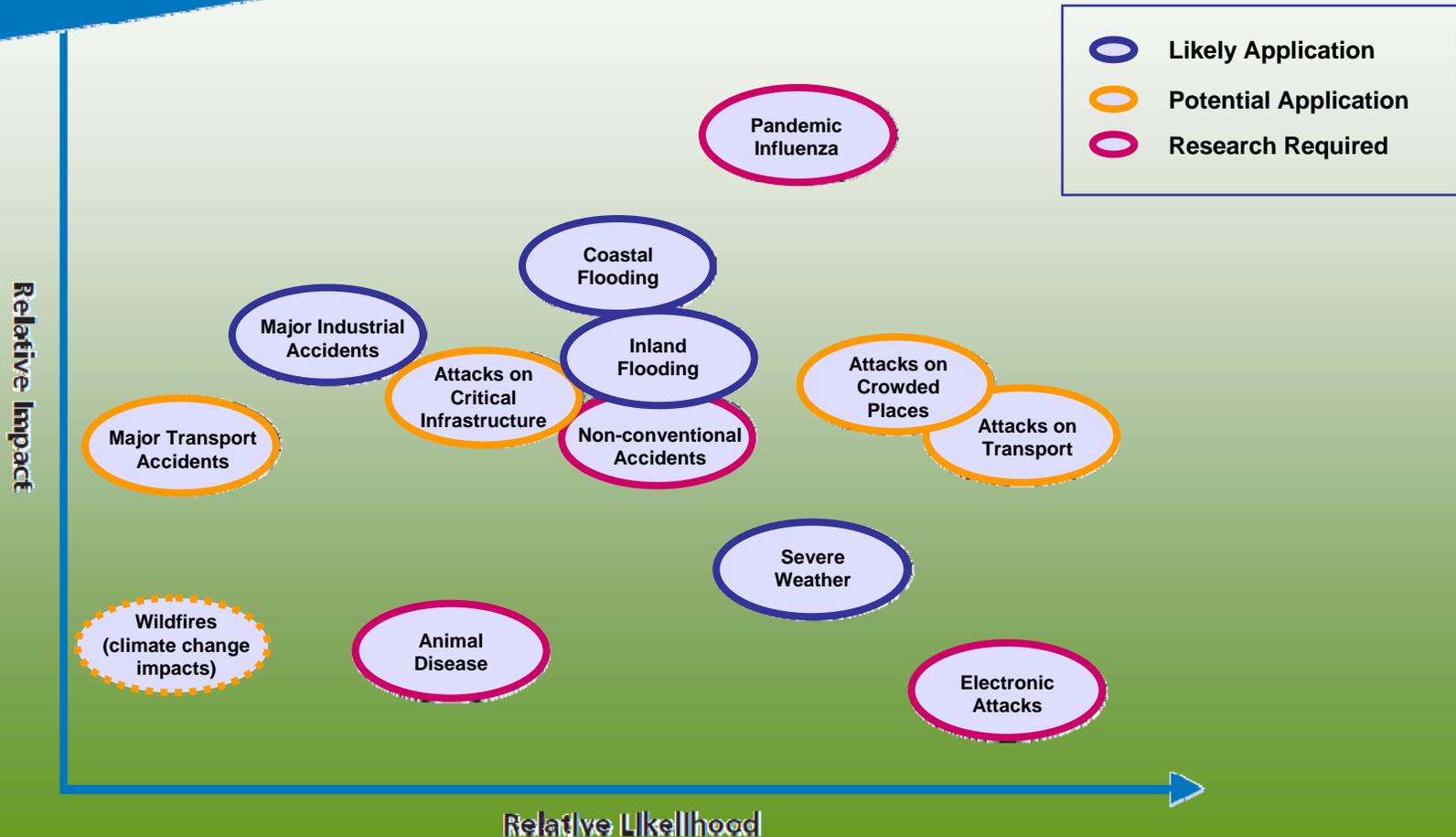
- Local Government Association
- Welsh Local Government Association
- Convention of Scottish Local Authorities
- Society of Local Authority Chief Executives
- Association of Local Authority Risk Managers
- Emergency Planning Society
- Association of Chief Police Officers
- Chief Fire Officers Association
- Ambulance Service Association

Private Sector Bodies

Telecommunications Network Providers
Water and Sewerage Service Providers
Commercial Ports
Rail Companies

Priority Applications and Scenarios

National Risk Register



(Adapted from the National Risk Register)

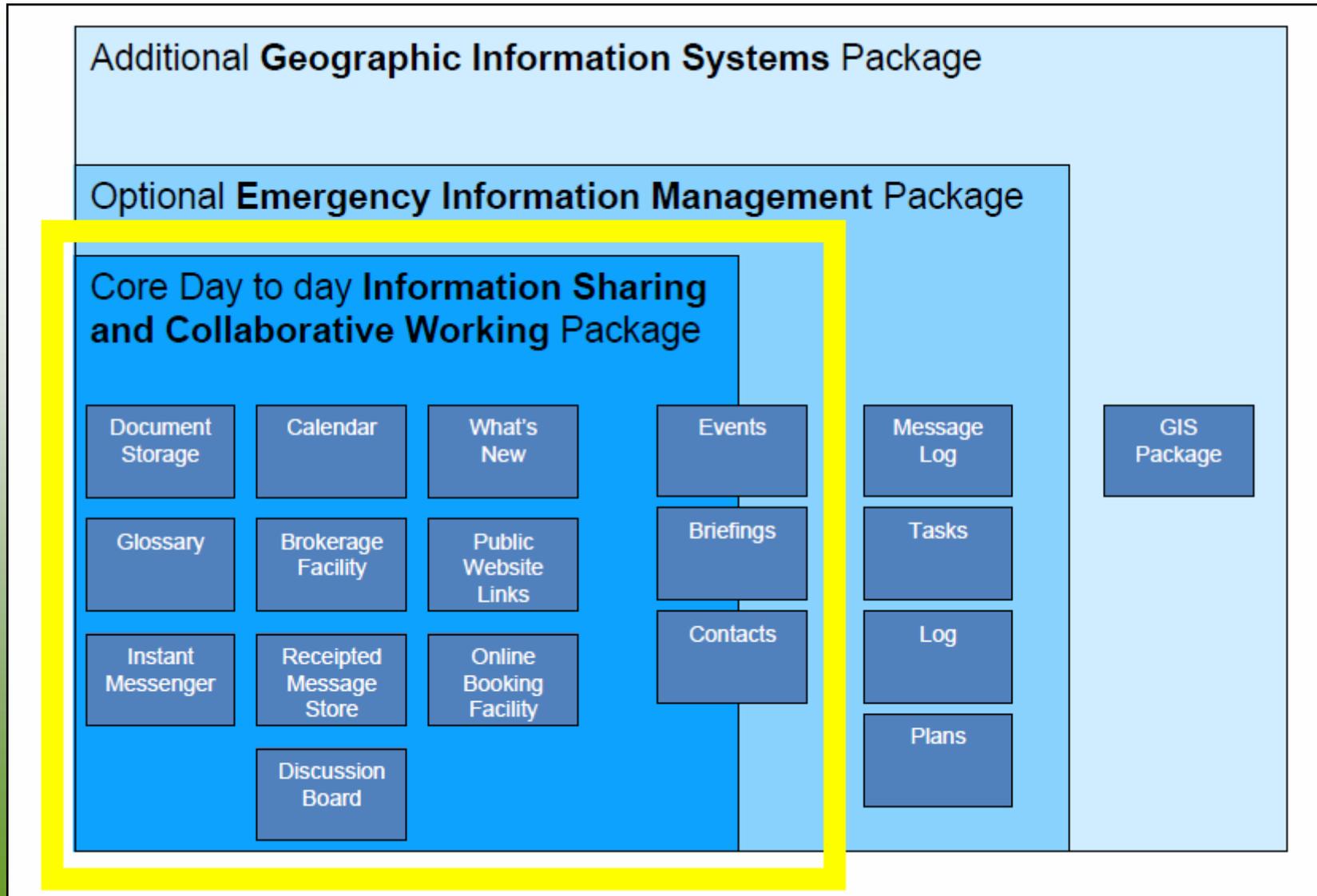
Developments in UK Resilience



- **Pitt Review of 2007 Floods**
 - Planning for better coordination in disaster response (Interdepartmental)
- **Strategy Development for Improving Telecommunications Resilience**
- **National Resilience Extranet**
 - Web-based tool for information sharing across the UK resilience and response community
 - Responders will have access to key information including RESTRICTED level for planning and response
 - Expected roll-out January 2010

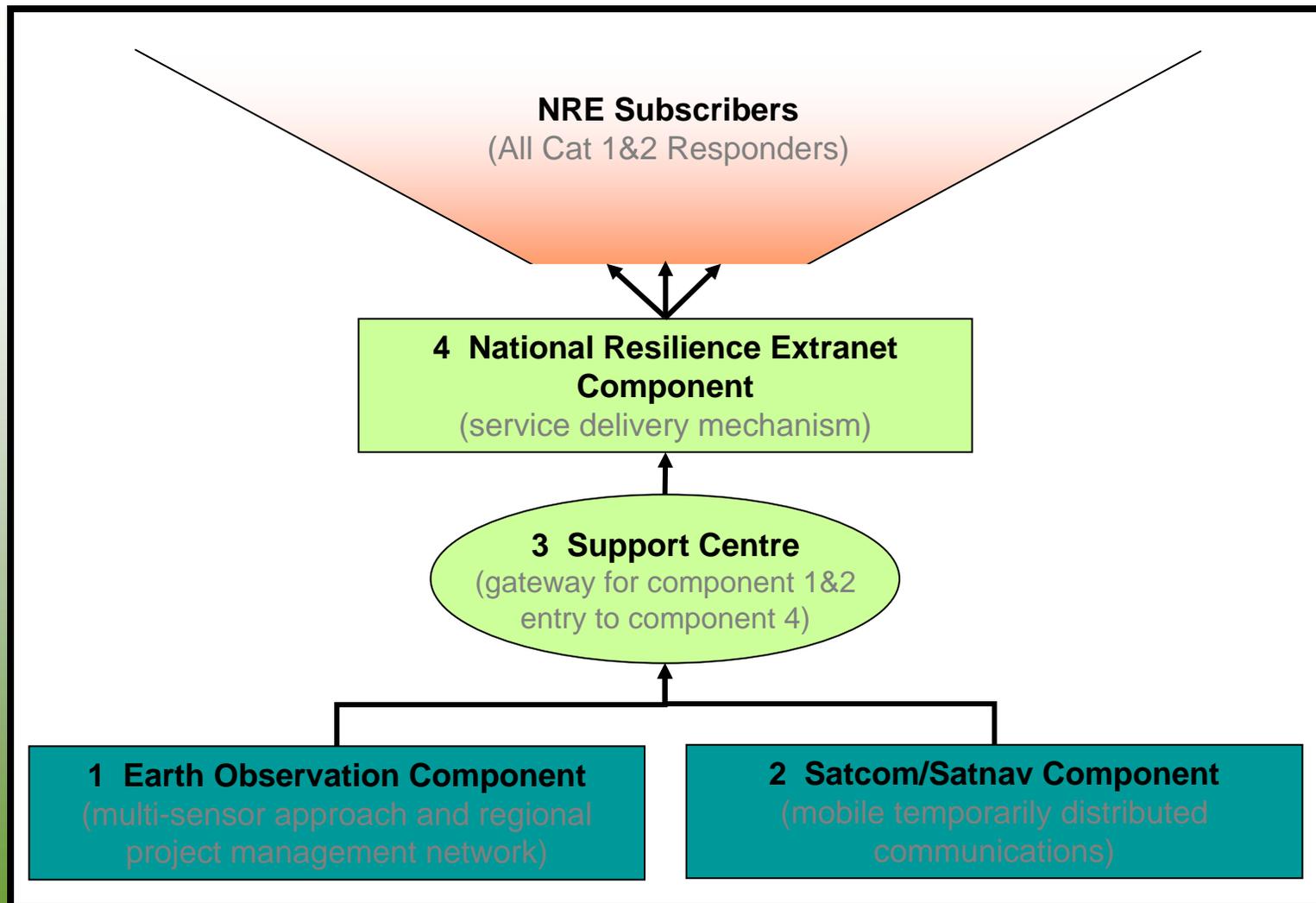


National Resilience Extranet



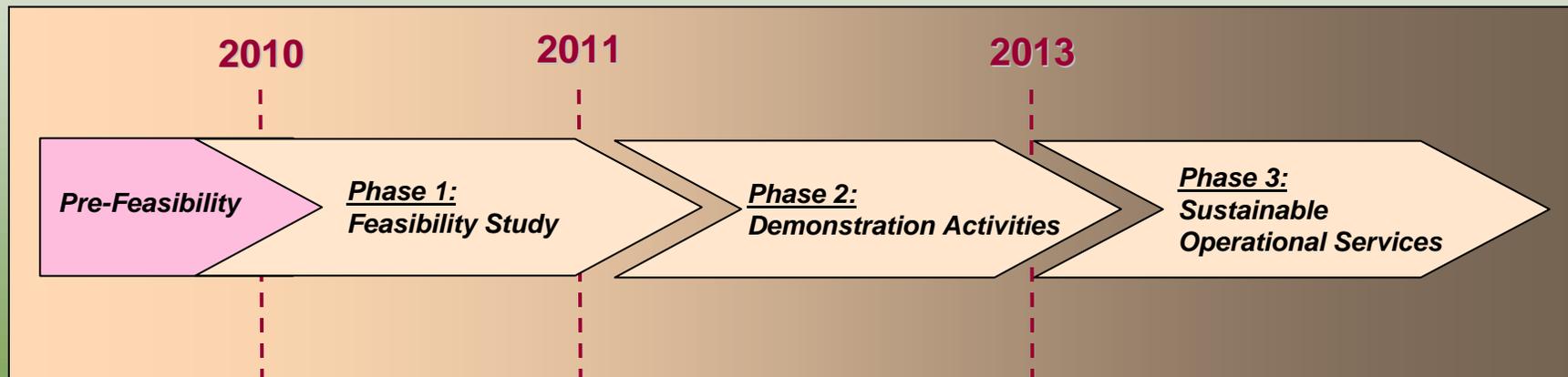
(Source: NRE Communications Materials)

Integrated Solution Delivery Framework



Project Goal

Goal: to develop integrated operational services using existing space assets to support the UK Resilience Community



Project Objectives

- Assess the current use of terrestrial and space systems for civil contingencies:
 - Earth Observation
 - Satellite Communication
 - Satellite Navigation
- Identify gaps
- Propose and demonstrate new services for priority applications
- Evaluate the National Resilience Extranet as a service delivery mechanism to all Cat 1 & 2 responders
- Determine the need for a virtual or actual support centre to implement the proposed solutions



International Imaging

Thank You!

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