‘All Hazards’ Information Management approach to disaster management

‘The right information, at the right place, at the right time’

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The Queensland Flood Commission of Inquiry acknowledged:

‘The need for improved information access, both within the Department of Community Safety (DCS) and in the broader disaster management community.’

This supported the DCS decision to commission the All Hazards Information Management (AHIM) Program address this issue.
A “smart” government would integrate all sources of information. The biggest impediment to all-source analysis and a greater likelihood of connecting the dots, is the human or systemic resistance to sharing information. And a great concern raised about the deployment of resources’ access across the sector.

The use of information technologies and information collation processes should be improved to accelerate the provision of essential information via agency websites.

There is no coherent system or set of processes currently in place for the sector-wide management of information. Information silos, communication barriers, and the lack of governance and collaboration protocols currently limit the level of information access across the sector.
Drivers for change

• The need for a scalable, risk-based, all hazards approach
• Current information flow is siloed with multiple operating environments
• Disasters do not respect borders; cross-jurisdictional information is the essential for improved community outcomes
• Local governments need a greater level of support from district and state disaster management groups during disasters
• The need for to drive community resilience through behavioural and social change.
All Hazards Information Management Program

Key objective
To build the capability of Disaster Management agencies, stakeholders and the community to ensure they are prepared and capable of effectively responding to a disaster.

The challenge
To improve the flow of information within the Disaster Management agencies, stakeholders and the community to improve disaster planning and response.
Six key capabilities

• Planning and intelligence - Improved intelligence capabilities can predict and track an event to allow for a fast response and informed decisions.

• Decision support - Delayed decisions can put lives and property at risk. Information is critical to enable fast, quality decisions and actions.

• Resource management and coordination - Decision-makers must have a clear understanding of capability and capacity to effectively allocate resources.

• Public engagements - Communities need information on local risks to empower them to make informed decisions about disaster mitigation, preparation, and response.

• Share Situational Awareness – A shared awareness enables responders to coordinate, synchronise, and to make effective, consistent, and timely decisions.

• Information Exchange and Interoperability - are key to all five program capabilities and are critical to the program’s success.

- Event
- Unmet Need
- Decisions
- Public Response
- Response Actions
- Emergency Services Response

Impact vs Effort

Time
Information flow

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‘Future State’ deliverables

• The Emergency Information Management Centre (E-IMC)
• An Information Management Framework
• An Interoperability Framework
• Services and Applications
<table>
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Future State Disaster Management Business Operating Model

Policy, Standards and Frameworks

Interoperability Framework

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The Emergency Information Management Centre (E-IMC)

- The E-IMC is essentially a brokerage where all players in the Disaster Management Organisation can exchange information in a systematic way.
- The E-IMC’s key client is the Queensland Disaster Management Arrangements.
- The E-IMC supports the functional organisational units and facilitates information flows throughout the broader Disaster Management Organisation.
The E-IMC

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Information Exchange

- Knowledge Exchange - Plans, Lesson learned
- Base Data – Demographics, Flood Maps
- Joint Business Processes – workflows, reporting
- Request/Response – resource management, task tracking
- Real time data – deployments, CAD feeds, BOM data, Telemetry
- Collaboration – less formal interactions, virtual situation rooms
- Event Notification – activation, warnings, alerting, internal notifications.
Services and Applications

- Social Media Analytics
- Coordination and Activation Services
- Collaboration Services
- Event Logging Services
- Reporting Services
- Service Request and Tracking Services
- GIS Services
- Knowledge Management
- Service Catalogue
- Incident Management Services
- Intelligence Fusion Services
- Simulation Services
Current Application Architecture

- Thick Client Application
- Proprietary Client/Server Interface
- Application Server
- Application Database

Future Application Architecture

- Composite Applications
  - Web Based Application
  - PDA Application
  - Smartphone Application
- Interoperability Framework
  - Web Services Server
    - Application Database
    - Application Database
  - Web Services Server
  - Web Services Server
  - Application Database
  - Application Database
‘Network’ of networks concept

Information Management Network

Department of Community Safety

Queensland Government
Program outcomes

• The localisation of information and services
• Interoperable technologies and systems
• More effective evidence-based disaster resilience plans and policies
• Stronger partnerships through coordination and collaboration
• Enhanced community awareness
Questions or comments?