



# *Emergency Response ICT Systems*

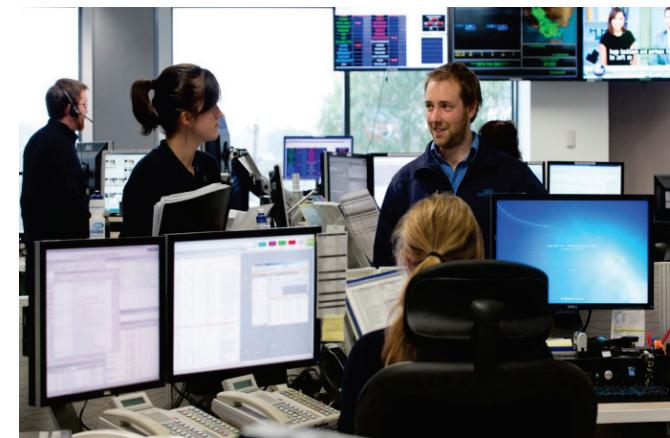
Sector Director, Information Systems Audit



## Background

Victorians rely on the state's emergency services organisations (ESO) for assistance during emergencies and crisis incidents.

This audit considered the processes and systems used *from* when an emergency call is received by the Emergency Services Telecommunications Authority (ESTA) *until* the successful dispatch of an emergency responder unit.



*Note: A future audit will examine dispatch to arrival at an incident.*



# Audit objective and scope

## Objective

To determine whether emergency response ICT systems were meeting the service delivery expectations of emergency services organisations.

## Scope

Eleven public sector agencies including ESTA, all the emergency services organisations, as well as their departments.

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# Conclusions

## Service Delivery and Dispatch

- When all systems are working, ESTA meets call-taking performance standards.
- But, ETSA has consistently failed to meet emergency ambulance dispatch standards over the past three years.
- Emergency services' radio networks require attention.



## ICT System Maintenance and Upgrade

- Difficult to see how ESTA can meet the expected growth in demand for its services, given the limitations of some current ICT systems and the available backup arrangements.



## Findings – Meeting service delivery expectations

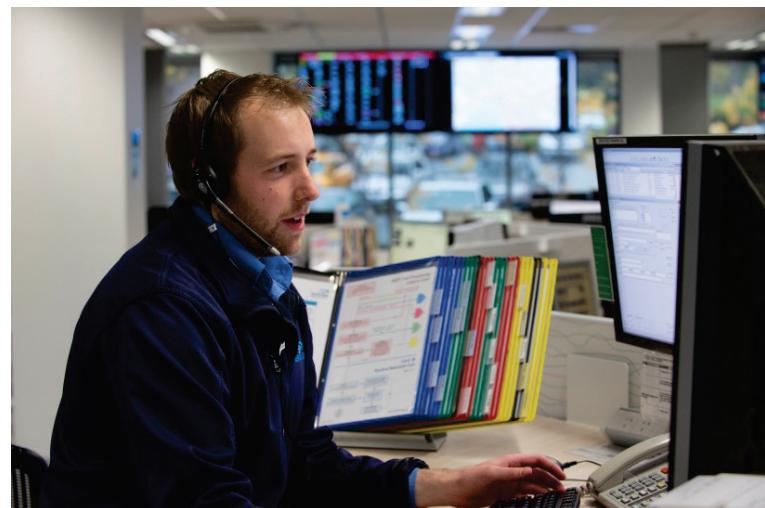
- Emergency Management Victoria (EMV) should be responsible for facilitating the interoperability of all organisations involved in emergency response.
- Triple Zero call-taking, dispatch and emergency resource management are effective during normal operations but is unacceptable for emergency ambulance and Victoria State Emergency Service dispatch.
- ESTA has difficulties meeting its dispatch performance targets for emergency ambulance.
  - The ambulance structured call-taking process is leading to delays in dispatching ambulances during periods when ambulance availability is limited.



## Findings – Dispatching and managing emergency resources

- Business rules need to be reviewed for ESTA ambulance dispatchers.
  - Need to select appropriate resources to dispatch and take account of crew meal break procedures.
- ESTA's State Emergency Communications Centres should be classified as critical national infrastructure because of the consequence of the loss of these facilities on the state.

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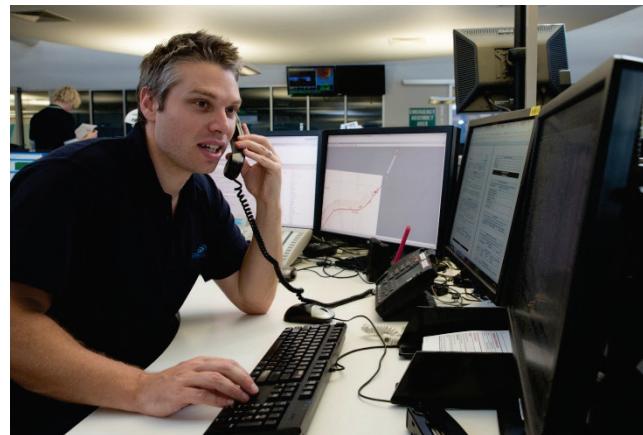
## Findings – Radio networks

- Legacy rural radio network:
  - Not satisfactory.
  - Lack of security is a safety risk for police and community.
- Police channels on the Metropolitan Mobile Radio (MMR) network can become congested due to:
  - voice traffic volumes attributed to peak periods
  - railway station Protective Services Officer activity.
- StateNet Mobile Radio (SMR) network used by all ESOs is unsatisfactory when compared to MMR performance.
- New Country Fire Authority digital radio network is meeting operational requirements and should be extended to other ESOs.



## Findings – Computer Aided Dispatch system (CAD)

- ESTA's CAD has failed on several occasions.
  - Resultant disruptions to its services.
  - Manual card-based process is activated.
- ESTA backup systems for use during a CAD system outage are inadequate.





## Findings – ICT system maintenance and upgrade

CAD:

- Not been upgraded for several years.
- Failed on at least five occasions in past 18 months.

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ESTA telecommunications network is out-dated.

- Will not be supported beyond December 2015.

Projects to replace both systems are underway.

- Outcomes should be reviewed once each project is completed.



# Recommendations

	Accept
1. That Emergency Management Victoria be responsible for facilitating the interoperability of all organisations involved in emergency response, including the Emergency Services Telecommunications Authority and Ambulance Victoria.	✓
2. That Emergency Services Telecommunications Authority includes Victoria State Emergency Service vehicle capability details in the Computer Aided Dispatch system database.	✓
3. That Ambulance Victoria: <ul style="list-style-type: none"><li>• reassesses the current structured call-taking script</li><li>• develops a single structured call-taking script for Triple Zero calls.</li></ul>	✓



## Recommendations – continued

	Accept
4. That Victoria Police implements the recommendations relating to protective services officers in the <i>Service Demand and Dispatcher Capacity Analysis</i> dated September 2013.	✓
5. That Emergency Management Victoria novates the head contract for the StateNet Mobile Radio network to the Emergency Services Telecommunications Authority.	✓
6. That the Emergency Services Telecommunications Authority, assisted by the Inspector-General for Emergency Management and responder agencies, improves the process for changing call-taking and dispatch procedures by comprehensively appraising the costs, benefits and operational impacts of these changes and agreeing a plan for their implementation with all affected agencies.	✓



## Recommendations – continued

	Accept
7. That the Emergency Services Telecommunications Authority, assisted by Ambulance Victoria, reviews the business rules to be applied by the Emergency Services Telecommunications Authority ambulance dispatchers in selecting appropriate resources for dispatching to events, taking account of meal break procedures.	✓
8. That the Emergency Services Telecommunications Authority reclassifies its State Emergency Communications Centres as critical national infrastructure.	✓



## Recommendations – continued

	Accept
9.	<p>That the Emergency Services Telecommunications Authority critically reviews:</p> <ul style="list-style-type: none"><li>• the current Computer Aided Dispatch 9.1 upgrade project against business case objectives, including system and network reliability and system redundancy, once the project is completed</li><li>• the ESTA Triple Zero telephony platform telecommunications upgrade project against business case objectives, including system and network reliability once the project is completed.</li></ul>
10.	That Emergency Management Victoria expedites the expansion of the Rural Mobile Radio network to all emergency services organisations.



## Relevant previous and future reports

### Past audit

- *Obsolescence of Frontline ICT: Police and Schools*, tabled June 2012.

### Future audit

- *Emergency Service Response Times*—will examine emergency service response times from a responder receiving an ESTA dispatch instruction until arrival of the responder at the scene.



## Contact details

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