EM

Potential ICT Failures and how the South Australian Government is preparing

The role of Information and Communications Technology (ICT) in society at large has changed dramatically over the past 20 years.

ICT has become fundamental to society's functioning. The IT/computing industry has transformed from a business platform designed to realise productivity and commercial gains, to a necessity of everyday life.

Households are relying on the Internet for shopping, entertainment, social networking, emergency warnings, voice, data and video telecommunications as well as conducting financial transactions.

The number of people using the Internet to work or conduct their business from home is also increasing significantly and few businesses can operate without the use of ICT.

Government is no exception to this; without the availability of ICT, the services that government provides to the community and the services necessary for the continuity of government will no longer be available.

The South Australian Government, similar to other governments, requires its ICT to provide critical services to the community. The confidentiality, integrity and availability of ICT infrastructure is essential for the physical, social and economic wellbeing of the state and in some cases, of the nation.

The South Australian Government relies on the functionality of these ICT services in order to send out warnings to the public in disaster or crisis situations through channels such as Alert SA or through the use of social media.

ICT services are also critical to the administration of emergency management services and underpin systems necessary for the location of critical infrastructure in times of emergency.

In this sense, ICT services are critical not only to the continuity of government but to the continuity of society.

As Prime Minister Gillard highlighted in January this year, Australia is a target for malicious cyber-attacks that can affect government, industry and the community alike. This reality has made preparation for the potential failure of ICT systems an important priority.

In recent years, sophisticated cyber-attacks have been used to disrupt nuclear power plants, released sewage into drinking water and hold company data and networks to ransom.

Government is a target for malicious cyber activity and we must be prepared for both natural disasters and cyber-attacks that could damage our communications and infrastructure.

As the Control Agency for ICT Failure, the Office of the Chief Information Officer has been undertaking planning activities to coordinate the restoration of State Government ICT should it fail.

Activities include environmental monitoring, awareness initiatives, and membership of a number of state and national ICT and cyber operations teams such as the Trusted Information Sharing Network, the Australian Communication Sector Group and the South Australian Communication Sector Forum. These memberships ensure that the team is always up-to-speed with the latest cyber events thus enabling us to be better prepared for any eventualities.

For further information about the role of the Control Agency for ICT Failure contact Sarah Mason, Principal Risk Adviser, Office of the Chief Information Officer.

New toolkit to measure community resilience

The Torrens Resilience Institute has recently completed a project for the Australian Government National Emergency Management Program entitled 'developing a model and tool to measure community resilience'.

On 7 December 2009, the Council of Australian Governments (COAG) agreed to adopt a whole-of-nation resilience-based approach to disaster management which recognises that a national, coordinated and cooperative effort is required to enhance Australia's capacity to withstand and recover from emergencies and disasters.

The National Strategy for Disaster Resilience (February 2011) sets out how the nation should aim to achieve the COAG vision. It emphasises that disaster resilience is not solely the domain of emergency services; rather it involves society as a whole.

The project 'developing a model and tool to measure community disaster resilience' supports the vision of the COAG National Strategy for Disaster Resilience by clarifying the definition of community disaster resilience and developing a tool for communities to measure their disaster resilience to all hazards.

The community using this tool will be better able to build resilience because it:

- foresees and/or acknowledges threats and risks
- works with the emergency services and other agencies
- has a sense-of-community and social capital and
- takes collective responsibility to reduce the socioeconomic impact of disruptive events, emergencies and disasters.

The full report and accompanying toolkit can be accessed at **http://www.torrensresilience.org/community-resilience-tookit.**

Each decision and action makes us more vulnerable to disasters – or more resilient to them. Thus disaster risk reduction involves every part of society, every part of government, and every part of the professional and private sector." United Nations International Strategy for Disaster Reduction.

page 1

BUILDING COMMUNITY & ORGANISATIONAL RESILIENCE

The principle objectives of the 2013 Resilience Conference are to provide a comprehensive educational approach to the National Strategy for Disaster Resilience (NSDR), with a whole-of-sector networking opportunity for attendees to help build a more resilient community with regards to business continuity and risk management.

We encourage all representatives across all agencies to consider attending the conference to hear first hand why this strategy is being driven from the top down and how you, your business and agency are involved.

The conference will be held in the iconic Adelaide Town Hall on Thursday and Friday 18-19 July 2013.

Visit the conference website **www.resilienceconference.org.au** to register.

Knowledge Hub builds disaster resilience

On 23 November, 2012, the Commonwealth Attorney-General's Department launched a new interactive website to help the emergency management sector and the community better understand and prepare for natural disasters.

The Australian Emergency Management Knowledge Hub provides a centralised disaster resource to help plan and better prepare for the challenges of natural disasters.

The site will allow stakeholder agencies such as Police, the State Emergency Service, fire agencies, health officials, councils and schools to connect and share experiences to improve community resilience to disasters.

As well as providing research, resources and news relevant to emergency management, the Knowledge Hub allows users to provide feedback and share ideas.

It includes a research clearing house, an Australian disaster event database, cross-sectoral discussion forums and new media collaboration tools such as Twitter, allowing users to contribute resources, share information and interact.

The intent of the hub is to support the implementation of the Council of Australian Governments' National Strategy for Disaster Resilience which recognises that a national, coordinated and cooperative effort is needed to enhance Australia's capacity to prepare for, withstand and recover from disasters.

The site can be accessed at **www.emknowledge.gov.au**

Reducing risks of future disaster

In a world where the suffering of communities in humanitarian disasters is beamed straight into our lounge rooms on a nightly basis, government relief and recovery efforts rightly attract considerable attention and generous contributions from governments and donations from individuals and corporate businesses alike.

But we know that many disasters could be prevented, or their impact greatly diminished, if sensible actions were taken beforehand to reduce known risks and to make communities more resilient. Indeed, over the last decade there have been successive reviews within Australia and there is a large and growing requirement for more focus on resilience and the mitigation of disasters caused by natural hazards.

Nevertheless, a surprisingly small proportion of global resources are spent on disaster risk reduction and in an Australian context there has been a slow but sure decrease in the levels of commonwealth funding and resources directed at disaster resilience and mitigation activities.

Even though most emergency managers and decisionmakers agree that the integration of disaster risk reduction measures into development policy is vital for reducing disaster impacts, spending in advance is difficult for several reasons.

Relief and recovery efforts following a disaster are action oriented, easy to quantify, readily accountable to donors and media friendly. In contrast, before a disaster occurs, it is not always obvious what should be done, hard to tell what difference preventative measures will

make, and difficult to decide how much to spend. Also, if prevention is effective, it may attract little attention.

In response to this issue the UK Government commissioned a study by a group of experts from a range of disciplines which was informed by the best current research across the physical sciences, health, social sciences and economics. The intent behind the study was to assess how science can reduce disaster impacts and on identifying the implications for decisionmakers up to 2040.

The aim was to provide advice to governments and international decision makers on how science can inform the difficult choices and priorities for investing in disaster mitigation, so that the consequences of future disasters can be effectively reduced.

The final report from this study was published in November 2012 and has drawn upon the latest developments in natural and social science, and lessons from past and ongoing disaster risk reduction initiatives.

Its findings demonstrate that disaster and death are not the inevitable consequences of natural hazard events and that it is possible to stabilise disaster impacts and save both lives and livelihoods given political leadership and concerted action by the wide range of stakeholders who have a part to play.

A copy of the report may be found at **http://www.bis.gov.uk/foresight/our-work/policy-futures/disasters/reports-documents**

Bushfire and Natural Hazards Cooperative Research Centre (CRC) announced

The Commonwealth Government has announced the establishment of a new Bushfire and Natural Hazards CRC from 1 July 2013 which will build on the work of the existing Bushfire CRC and expand research efforts into other natural hazards.

The federal government will contribute up to $47 million over eight years to the new centre with this funding matched by state and territory governments.

Chris Beattie, Chief Officer of the South Australian State Emergency Service, has welcomed the initiative.

"This will see the already valuable work of the Bushfire CRC now expanded and transferred to a new CRC which will include other natural hazards such as flood, extreme wind, heatwave, earthquake and sea inundation," Mr Beattie said."

"As we have seen across the nation, and indeed across the world, floods, storms, cyclones, earthquakes and storm surge have an enormous impact on countries and communities. Recently the grief and devastation following the floods and severe storms across many states of Australia demonstrate the need to continuously seek better ways of reducing these impacts.

"The results and benefits of the current Bushfire CRC research have made a great deal of difference in the way that hazards have been managed. With the broader focus of the Bushfire and Natural Hazards CRC these benefits will be expanded to include some of the most devastating and expensive disasters that are experienced," he said.

The next steps for the broader industry will involve developing a research agenda and governance arrangements that will ensure the maximum benefit is received from this new approach.

South Australia's contribution towards setting the research agenda is being led by Mr Brenton Keen of SAFECOM in collaboration with the State's Hazard Leaders while the State's representative on the Australia-New Zealand Emergency Management Committee, Mr David Place, is working with national partners to establish the governance framework.

The Bushfire and Natural Hazards CRC will undertake vital research to support the development of cohesive, evidence-based policies, strategies and tools to build a disaster-resilient Australia.

The funding will enable the CRC to provide a long-term research base that directly supports our emergency services as they work to prevent, prepare for, respond to and recover from natural disasters.

For more information on the new CRC visit **http://www.aemi.edu.au/bnhcrc/** or contact Brenton Keen on (08) 8463 4117.

New break-in radio alert system presented to SA emergency services sector

New break-in radio technology, developed by Victorian company Emergency Warning Systems (EWS), was demonstrated to representatives of South Australia's emergency services sector during the recent Association of Public-Safety Communications Officials (APCO) conference held at the Adelaide Convention Centre.

The technology was recently the subject of a trial at Eldorado, in north eastern Victoria, for the state's Fire Services Commissioner Craig Lapsley. Also attending the trial were representatives from Victoria's various emergency services organisations.

EWS Managing Director Geoff Drucker said: "Our technology delivers an outcome much like the warnings delivered in road tunnels where radio station broadcasts are interrupted to communicate a warning message.

EWS' patented technology is designed to save lives and protect property by broadcasting a radio message saying what to do, when to do it and how.

The system searches and finds every AM or FM radio station operating in the area at risk. It then broadcasts the emergency message just in the target zone on all stations to ensure that anyone listening to any radio station will get the message to take the appropriate action to protect lives and property.

EWS' technology can be deployed in different ways to suit different needs. It can be installed in a police car to alert traffic ahead of a high-speed pursuit, mounted on a trailer which can be moved from location to location as a threat such as rising floodwaters unfolds, and finally it can be permanently installed in a disaster-prone location like Eldorado.

Mr Drucker summarised by saying "One of the key attributes of the technology is that different messages can be sent to different locations all via the same radio stations at the same time."

New website to assist individuals and households mitigate financial risks

Know Risk is a national community resilience initiative designed to assist the public better manage their practical and financial risks.

The concept of *Know Risk* was born from the impact of the natural disasters that have occurred in recent years, including the devastating floods and bushfires.

Know Risk has a prime objective to help Australian individuals, families and businesses better understand and protect themselves against risk. Know Risk does this through a network of mobile tools and web-based applications. These tools include engaging, interesting videos, quizzes and simple guides which will assist the community to appreciate the risk that they face in their lives and understand how best to manage them.

Through the use of web-based activities at **www.knowrisk.com.au** and the Insurance Tracker Mobile Application (available both on the website and as an iPhone application downloadable from the Apple store) the site is able to provide a range of engaging tools and information for the public.

Reprint of 'Keeping Safe in Emergencies' guide

The Keeping Safe in Emergencies guide was developed in 2010 by the State Recovery Office at the instigation of the then-Minister for Emergency Services Jennifer Rankine who was concerned that people with vulnerabilities may be confused by the range and complexity of disaster plans that were being produced.

It is designed as an information and planning flipchart that contains safety information for extreme heat, bushfire, home fire safety, influenza, flood and earthquake.

The flipchart is then slipped inside a clear plastic sleeve with a magnet on the back. This allows the document to be kept in sight and easily accessible on the fridge in case of emergency.

The guide has proved to be very popular with a range of people with vulnerabilities in the community. The State Recovery Office has now distributed almost 65.000 copies. There has been a consistent flow of requests for the flip chart from government, local government and non-government organisations.

Occasionally individuals have also contacted the office for a copy.

Feedback continues to be positive and steady demand has resulted in the need for a reprint.

The guide is currently being reviewed and a reprint will be undertaken once that process is complete.

For any enquiries please contact the State Recovery Office on 8415 4302.
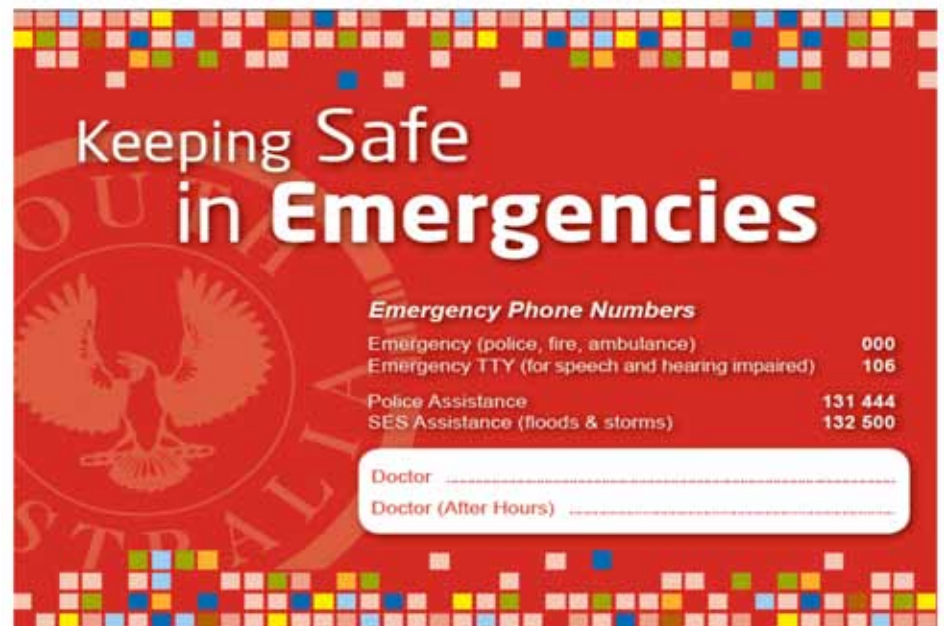
EARS development now at prototype stage
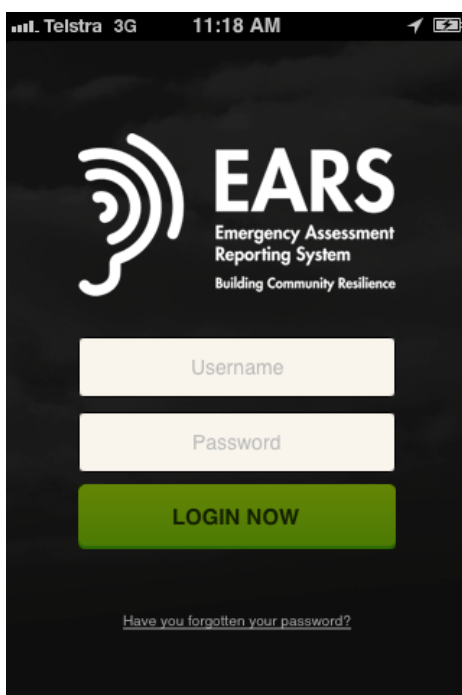
The Emergency Assessment Reporting System (EARS) is currently being developed by the Local Government Association (LGA) as a result of the number of substantial flooding events that impacted various SA councils in 2011.

The paucity of real-time information from these flooding events made it difficult for the various emergency service agencies to adequately plan their response and recovery assistance. As a result, the LGA explored various options that might be available to improve the reporting of incidents.

A decision was taken to develop a smart phone application that would link to a central database and hold all the information about a particular storm, flood or bushfire. The information would be made available to selected emergency service agencies so that they could better plan their response.

The functionality of the smart phone enables time-stamped and reasonably accurate geo-location and offers the reporting mechanisms of text, voice, video or photographs. The reporting of incidents will be consistent in both format and assessment.

The key to the proposed system is the combination of local resources (the human element) and the relatively cheap technologies of smart phones and the Cloud.

The system is currently at the prototype stage with testing occurring over the coming months before being released as an App to councils and the emergency service agencies.

Each council and agency will determine who they will allow to access the system.