GALWAY GOES MOBILE WITH INFORMATION MANAGEMENT SYSTEMS FOR MAJOR EMERGENCIES

The introduction of an electronic Information Management System (eIMS) within the last year has vastly improved the strategic management of critical events and monthly training programmes for major emergencies in Galway. Report by Paul Duffy, Senior Assistant Chief Fire Officer, Galway Fire and Rescue Service, and Mark Conroy, Acting Head of IT, Galway County Council.

In 2017 Galway Fire & Rescue Service introduced a new mobile On-Site Co-ordination Centre (OSCC), which incorporated an electronic Information Management System (eIMS) to replace the manual boards, which are now used for back-up support.

The Local Co-ordination Centre (LCC) is a critical part of Galway County Council's major emergency planning and response process. Central to its operation is the use of the Information Management System (IMS).

Traditionally this system was based on a set of four manual white boards as shown in Figure 1, which were manually populated. This system is simple and reliable but has certain disadvantages and does not take advantage of available technology.

Figure 1. Manual Information Management Boards

Figure 2. Mobile On-Site Co-ordination Unit (GY15C4).

Figure 3. Electronic Information Management System Boards display the latest information at the On-Site Co-ordination Centre (OSCC).

Figure 4. IMS laptop at the On-Site Co-ordination Centre (OSCC).

Population of the electronic boards is via a laptop and a PowerPoint slide master presentation for each of the standard boards. A piece of add-on software to PowerPoint and a docking station allows the four IMS presentations to appear on the laptop in edit mode but in presentation mode on the TV screens.

The mobile OSCU (GY15C4) can be used as a stand-alone unit or as part of a modular command centre including the

GFRS Incident Command and Incident Support Units (complete with air shelter) as shown in Figure 5.

Figure 5. The layout of the Modular Command Centre, including an air-shelter.

CO-ORDINATION CENTRE UPGRADE

In 2018 the eIMS system was extended by upgrading the Local Co-ordination Centre (LCC) – based in Room G01 Aras an Chontae – in order to mirror the mobile OSCU as shown in Figure 6.

The new system will improve the strategic management of major emergencies and severe weather or flood incidents particularly through the ability to share the eIMS screens in real time over the internet.

At the LCC, the electronic Information Management System (eIMS) consists of a laptop (with an additional wireless screen, keyboard and mouse for flexibility) and four wall-mounted TV screens.

The screens, which recognise current situation, key issues, completed actions, and strategic aims and priorities, are projected via PowerPoint presentations onto four TV screens.

The system has the following advantages:

- The system can be set up very easily within a few minutes.
- The boards can be saved and printed.
- Additional information (maps, weather assessments, drone footage can easily be included.
- Previous screens can be re-called and viewed at the touch of a button.
- The screens can be populated remotely initially by nominated individuals.
- The fourth TV is also configured for Saorview TV.

A second laptop is used to connect to a ceiling-mounted projector to allow the display of relevant information including maps and various web-based information sources (such as Metweb, OPW tidal and storm surge information, the Galway County Council Arc GIS road closure map) and drone footage (Figure 7). This laptop can also be used to populate the 'Actions' screen by the action manager.

WEB-BASED INFORMATION SHARING

The system is used with Office 365 OneDrive/SharePoint to create a web-based eIMS system. The eIMS screens can be shared in real-time with key position holders allowing access from their desktop, laptop or mobile phone (Figure 10).

The screens can also be shared via secure link to the Crisis Management Teams (CMT) of the HSE and An Garda Síochána, and also to the Regional Co-ordination Centre (RCC) or National Emergency Co-ordination Centre (NECC) if appropriate (as shown in Figures 8 and 9) – the latter shows the eIMS screens shared with Galway County Council CMT in the Council Chamber.

The remote population of the boards is also possible for nominated personnel in advance of the activation of the LCC. The Local Co-ordination Group can also view the eIMS screens from the OSCU in real-time again if this is required and appropriate. These can be displayed in lieu of the LCC screens directly on the four TVs or individually via the projector.

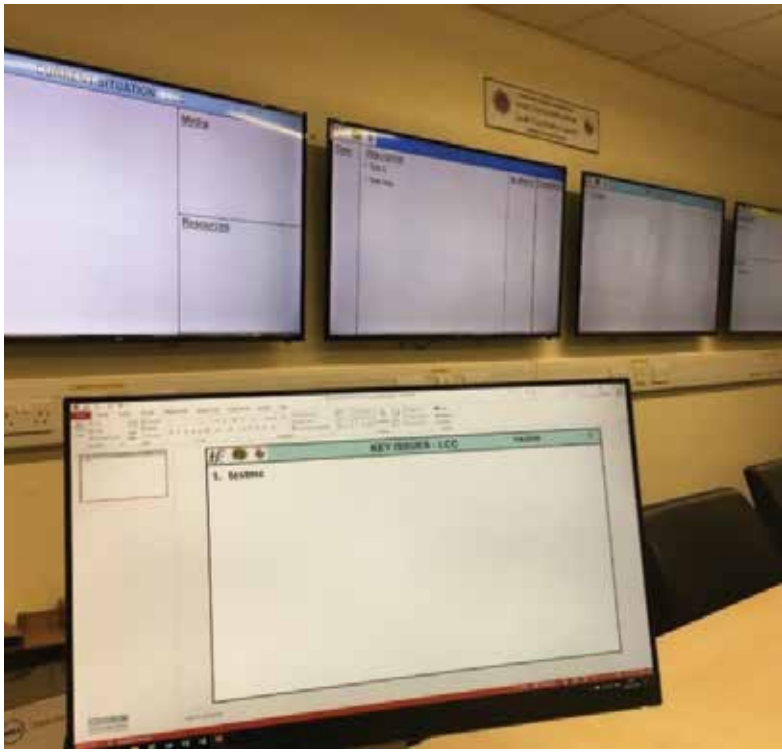

Figure 6. Electronic IMS in the Local Coordination Centre (LCC).

Figure 7. Real-time drone footage displayed via laptop and projector.

INFORMATION MANAGEMENT SYSTEM

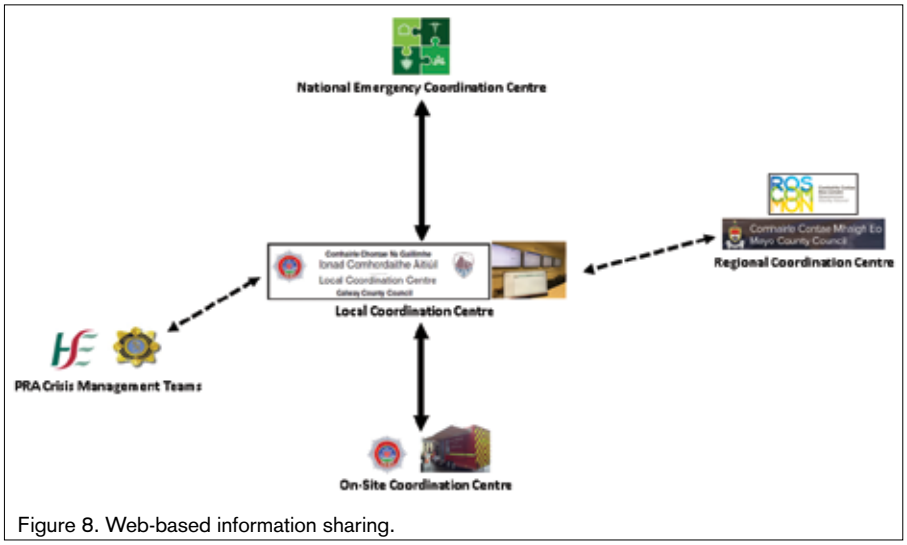

Figure 8. Web-based information sharing.


Figure 9. IMS screens shared with the LA CMT in Galway County Council's Chamber.

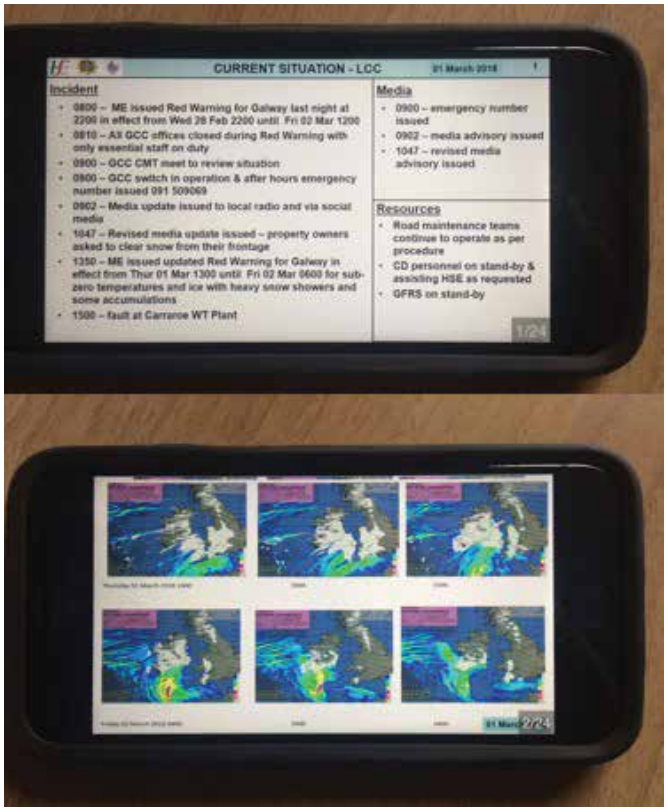

Figure 10. RCS IMS screen viewed on a mobile phone.

ADDITIONAL EQUIPMENT

As part of the upgrade of the LCC a teleconferencing facility has also been installed to facilitate inter-agency communications particularly at strategic level.

The facility has a TETRA base station (Figure 11) to ensure resilient communications with the OSCU and key members of Galway County Council, the Fire Service, Civil Defence, An Garda Síochána and the HSE Ambulance Service.

REAL-TIME INFORMATION

The eIMS is a very powerful system which facilitates real-time information recording and sharing, which serves to improve the strategic management of critical events.

The system is also being used to conduct monthly eIMS exercises to improve training for major emergencies, COMAH external emergency plan activations and severe weather events, without the need for formal exercises. These can be time-expensive for many personnel.

The system is also very cost effective for a process used infrequently and the LCC upgrade was achieved for approximately €5,000, including laptops and projector.

Galway County Council is very appreciative of the support received from the National Directorate for Fire and Emergency Planning during these projects.

Figure 11. The TETRA base station installed in the Local Co-ordination Centre (LCC).