

Exercise Management, Analysis, & Training



Integrated, realistic, measurable – perhaps the greatest challenge facing emergency management is the ability to effectively train for multi-agency collaboration. Through the CAE EM-Sim program, CAE offers an integrated, simulation-based training environment to support multi-agency, multi-jurisdictional teams at both the first responder and incident command level. Using interactive first-person environments integrated with command and control tools, CAE provides a realistic immersive environment to train integrated response teams.

Understanding multi-agency collaboration

In order to effectively train and rehearse for multi-agency emergency operations, the nature of our client's multi-agency collaboration must be understood. CAE applies an all-agency methodology to analyze the relationships between response organizations from the frontline, municipal level responders, through provincial and state level agencies, to national and international level organizations. Our team identifies the agencies that must collaborate; their roles within the multi-agency response; their relationships with other agencies within the team; and their internal structure, business processes, and systems. From this data, the organizational behaviours of each agency are modelled and represented within the virtual environment. As a result, no training environment is the same. CAE customizes it to the client's circumstances for a more realistic training environment.

Simulation-based training environments

To overcome the limitations of live training – cost, time, and limited scenario exposure – CAE has developed simulation environments to facilitate multi-agency training. The use of two- and three-dimensional virtual environments immerses emergency personnel in the scenarios, giving them both command and frontline level situational awareness of the scenario and aiding them in operational decision making.

Using the latest computer generated forces (CGF) modelling tools and hazard modelling algorithms, the CAE team develops realistic scenarios to train emergency managers and to test their strategies. Scenarios include:

- Natural disasters (floods, forest fires, earthquakes);
- Man-made disasters (train derailments, chemical spills, wide-scale power outage); and
- Terrorist attacks (explosions, hostage takings, radiological events).





Exercise management tools

The more realistic the exercise environment, the better the training experience. CAE's multi-agency training environment integrates a number of exercise management tools that immerse personnel in realistic circumstances. Visualization tools provide situational awareness of the event, while communication tools are used to control the unfolding of the scenario. The exercise communication tool integrates the use of wireless devices, pagers, cellular phones, and email to provide scenario updates and to engage teams in realistic exercise communications.

After-action review & analysis

CAE offers fully integrated after-action review and analysis capability to analyze the effectiveness of strategies and training. In addition to playback features, CAE offers in-depth statistical analysis of team movements, communications, decision making, and exercise outcomes based on training objectives.



Anytime, anywhere training

One of the benefits of simulation-based exercises is that they are not limited to one location. They have an "anytime, anywhere" functionality that allows emergency personnel the freedom to participate in exercises from any location through an internet connection. Command centres and training rooms around the world can be linked to run distributed integrated exercises.

A challenge often faced by multi-agency exercises is the ability to engage all agencies at the same time. Simulation affords organizations the opportunity to participate in multi-agency exercises or single agency exercises in a constructive environment. Organizations are represented by entities and given behaviours in line with their established business processes and strategies.

Program example

At George Brown College in Toronto, Canada, CAE has jointly developed a simulation-based training laboratory to support George Brown's Certified Emergency Manager program. Within the emergency operations centre environment, students participate in multi-agency exercises to plan, test, and train for integrated response. CAE provides exercise management, analysis, and training tools and support to better prepare students for real-world situations.

Canada

Attn: Marketing
8585 Côte-de-Liesse
Saint-Laurent, Québec
Canada H4T 1G6
Tel +1-514-341-6780
Fax +1-514-734-5718
milsim@cae.com

United States

3501 Quadrangle Blvd., Suite 310
Orlando, Florida 32817
Tel: +1-407-384-4543
Fax: +1-407-384-4573
cae_usa@cae.com

United Kingdom

Innovation Drive, Burgess Hill
West Sussex RH15 9TW
England
Tel +44 (0) 1444-247535
Fax +44 (0) 1444-244895
cae_plc@cae.co.uk

Australia

Suite 6, 260 Auburn Road
Hawthorn VIC 3122
Australia
Tel: +61 3 9818 2088
Fax: +61 3 9818 8277
caepls@cae.com.au

CAE Professional Services

1135 Innovation Drive, Suite 300
Ottawa, Ontario
Canada K2K 3G7
Tel: +1-613-247-0342
Fax: +1-613-271-0963
caepls@cae.com

Germany

Steinfurt 11
D-52222 Stolberg, Germany
Tel +49-2402-106-0
Fax +49-2402-106-270
info@cae-gmbh.de