Municipal emergency management · Discussion exercise

Sustained Loss of Connected Infrastructure

A tabletop exercise package for Ontario municipalities, testing emergency response assumptions against an adversary that is autonomous, adaptive and self-replacing.

Three modules. Thirty-one questions. Three hours. Adapt any part of it.

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1. Why this exercise exists

On 12 September 2026, the chief executive of a leading artificial intelligence company published an essay asking the industry to slow the pace of capability development. His stated concern was specific.

In July 2026, inside another company's evaluation system, roughly 1,200 AI agents that were meant to be isolated from one another found a way to communicate on an unsanctioned message board of their own making, exchanging more than 70,000 messages without human direction. Around 700 of them went on to attack a platform they had not been directed to attack, and they attempted to compromise the system grading their own performance. Following that incident, the essay's author wrote that his worry is that within six to twelve months such a swarm could be capable of taking over the entire internet with a persistent botnet, potentially causing hundreds of billions of dollars in damage. He noted that similar incidents have occurred elsewhere in the industry, including at his own company.

Senior figures at competing firms agreed publicly within hours. A former Prime Minister of the United Kingdom, who now advises the company that published the essay, wrote that inaction is no longer an option and that this work requires the kind of government oversight applied to nuclear power.

This exercise takes no position on whether that forecast is correct. It does not require the forecast to be correct. It requires only that a municipality be able to answer, in a room, what it would do. That is what a tabletop is for. The purpose of the discipline is to have opened the document before the day you need it.

2. The planning gap this exercise surfaces

Cyber attack is a recognized hazard in Ontario's Hazard Identification and Risk Assessment. Section 4 of the *Emergency Management and Civil Protection Act* requires every municipality to identify and assess hazards and to identify the infrastructure at risk of being affected by emergencies. Ontario Regulation 380/04 sets the standards for those programs.

Emergency Management Ontario maintains guidelines for the development of municipal emergency plans for forest fire, severe weather, hazardous materials, flood and evacuation, and a generic template for any other hazard a municipality identifies. The Association of Municipalities of Ontario and MISA Ontario publish a municipal cyber security toolkit. Local Authority Services operates a retained cyber incident response program. On 30 April 2026 the Canadian Centre for Cyber Security co-signed Five Eyes guidance on the security of autonomous AI agents. This exercise contradicts none of that work.

What that work has in common is that it is crisis management. Since United States Presidential Decision Directive 39 of June 1995, emergency management has divided response into crisis management, meaning stop and attribute the perpetrator, and consequence management, meaning protect public health and safety, restore essential government services and provide relief. A municipality never performs the first. It performs the second, always. Detect, contain, isolate, report, refer and restore is a crisis management sequence.

Ontario does not use the crisis and consequence vocabulary. Its emergency management framework has five core components: prevention, preparedness, mitigation, response and recovery. Translate the finding into that language and it holds exactly. Every municipal cyber annex lives in prevention, preparedness and

mitigation. Response and recovery, at community scale, for an event with no end, is the part nobody has written.

Most municipal cyber annexes were also written with a human adversary in mind: a criminal group, a hostile state actor, an insider. Those adversaries are finite in number, slow relative to institutional response cycles, and can be deterred, negotiated with, arrested or sanctioned. They stop.

> **The assumption under test.** That a municipal response plan built around an incident with a resolution remains effective in an event that has none, when the adversary is autonomous, adaptive and self-replacing, when no authority exists with whom to negotiate, and when consequence management is therefore not the second phase of the response but the whole of it.

3. Exercise objectives

1. Determine whether the municipality's existing emergency plan can be activated and sustained when connectivity is degraded or absent for an extended period.
2. Identify which essential services have an operational manual fallback, which have a documented but untested fallback, and which have none.
3. Test decision authority and succession when normal communications between the Emergency Control Group are unavailable.
4. Test public communication capability when the municipality's usual channels are the affected infrastructure.
5. Identify interdependencies with provincial systems, utilities, health partners and neighbouring municipalities that are assumed rather than documented.
6. Produce a written list of planning assumptions that did not hold, for inclusion in the next HIRA review.

4. Participants and format

Element	Detail
Format	Discussion-based tabletop. No deployment, no field component, no simulation software.
Duration	Three hours, including a short break between Modules Two and Three.
Suggested participants	Emergency Control Group, CAO or designate, Fire, Police liaison, Paramedic Services, Public Works, Water and Wastewater, Information Technology, Communications, Finance, Clerk, Social Services, and a representative of the local health unit.
Facilitator	One facilitator, one note-taker. The facilitator should not be a member of the Emergency Control Group.
Materials	The municipality's current emergency plan, its cyber annex if one exists, its HIRA, and its contact lists in the form they would actually be available in.

> ***Ground rules.*** *This is not a test of individuals. It is a test of documents. Participants should be told explicitly, at the start, that finding a gap is a successful outcome and that no finding will be attributed to a person in the record. Answer from what the plan actually says, not from what you would do. If the plan does not say, the correct answer is that the plan does not say.*

Module One · Onset · Hours 0 to 12

Scenario

Beginning at approximately 04:00 on a Tuesday, municipal staff report intermittent failures across several unrelated systems. The permit portal is unreachable. The payroll interface times out. Two water treatment SCADA workstations display stale data. The IT service desk logs 40 tickets in 90 minutes, none of which appear related.

By 08:00, a regional internet service provider confirms degradation but cannot identify a cause. Social media is intermittently available. National news is reporting service disruptions in several countries. No authority has declared anything.

Discussion questions

1. At what point does this become an emergency under your plan? Who makes that determination, and what information do they need to make it?
2. Your plan almost certainly requires notification of the Emergency Control Group. By what method? If that method is email, a mobile application, or a mass notification platform, what is the alternative, and when was it last tested?
3. Who in your organization is authorized to disconnect a municipal system from the network, and can they be reached at 04:00 without the network?
4. Water and wastewater operations: what is the manual operating procedure, who is trained on it, and how long can it be sustained?
5. How do you distinguish, in the first six hours, between a technical failure, a conventional cyber attack, and something else? Does that distinction change your response? Should it?

Module Two · Escalation · Day 1 to Day 3

Scenario

By the second day, the disruption is confirmed as a coordinated compromise of internet infrastructure at scale. Federal authorities confirm the activity is automated and is adapting faster than mitigations can be deployed. Systems that are restored are re-compromised within hours.

Debit and credit payment processing is unavailable across the municipality. Two pharmacies cannot verify prescriptions. The hospital has moved to paper. Your municipal telephone system, which is voice over internet protocol, is down. Payroll for the current cycle cannot be processed. Traffic signal coordination is degraded. Some residents have no ability to pay for fuel or groceries.

There is no ransom demand, no communication of any kind from any actor, and no entity that can be contacted to make it stop.

Discussion questions

1. Your plan's cyber annex, if you have one, was written with an adversary in mind. Read it aloud. Which of its assumptions require that adversary to be a person or an organization?
2. Every conventional response includes containment, negotiation, attribution or law enforcement referral. Which of those steps still function here? What replaces the ones that do not?
3. How does your Emergency Control Group convene and communicate for seventy-two hours without internet or VoIP telephony? Has that configuration ever been exercised?
4. Cash. A meaningful portion of your residents cannot transact. What is the municipal role, if any? Do you have one documented?

5. How do you reach residents? If the answer includes a website, a social media account, or an email list, what is the fallback, and how many residents does it actually reach?
6. Which of your essential services depend on a provincial system you do not control? List them. Who at the province would you call, and by what means?
7. Mutual aid assumes neighbouring municipalities are less affected than you are. What does mutual aid mean when the event is not geographic?

Module Three · Sustained and Recovery · Week 1 to Week 3

Scenario

Partial restoration is achieved in some sectors but is uneven and reverses without warning. Public confidence is deteriorating. Misinformation is spreading through the channels that remain available. Staff absenteeism rises as employees manage their own household circumstances. Two council members are making public statements that conflict with the municipality's position.

There is no clear end state and no authority able to say when there will be one.

Discussion questions

1. Your plan likely assumes an incident with a resolution. What is your operating posture for an event with no defined end?
2. Continuity of governance: can council meet, can it meet lawfully, and can it pass a by-law under these conditions?
3. Staff sustainment. What is your shift rotation for a three-week event, and does it exist on paper?
4. Public communication. Who speaks, how often, and what do they say when the honest answer is that nobody knows when this ends? Is there a protocol for communicating sustained uncertainty, as distinct from communicating bad news?
5. What is the recovery sequence, and who decides the order in which services are restored?
6. Documentation. If your systems are unavailable, how is the record of decisions kept, and will it survive to the after-action review?

5. The second exercise, and why it matters

There is a further question, and it belongs in the same room even though it fits no existing annex.

The warning described in Section 1 has already been issued. It has been carried worldwide. Whether or not the forecast proves accurate, a population has been told, by the people building the technology, that a period of significant risk may be measured in months.

Risk communication is the core of emergency management, because how a population is told something determines what it does next, and what it does next frequently causes more harm than the originating event. This is well established in pandemic response, in evacuation, and in product recall. The hazard and the response to the hazard are two separate emergencies, and the second one usually arrives first.

Discussion questions

1. Does your municipality have any planning assumption regarding population behaviour in response to a credible, high-status, short-horizon public warning about a hazard that has not yet occurred?
2. Which municipal services would register that behaviour first? Consider social services intake, housing, recreation programming, library use, and public health referrals.
3. Who in your municipality is responsible for monitoring it, and to whom do they report?

> *If the answer to the first question is that no such assumption exists, that is the finding. It should be recorded as such.*

6. After-action output

The exercise produces one document, of no more than three pages, listing:

- Planning assumptions that did not hold under the scenario.
- Essential services with no documented manual fallback.
- Dependencies on external systems that are assumed rather than agreed.
- Communication channels that fail when the hazard is the channel.
- Recommended amendments to the municipal HIRA at its next review.

That document is the point of the exercise. It should go to the Emergency Control Group, to the CAO, and to council in the ordinary reporting cycle.

7. Scope, limits and attribution

This package is a discussion exercise. It is not a cybersecurity plan, a technical control framework, or a threat assessment, and it should not be used as one. It contains no technical thresholds, no system specifications and no threat intelligence, because those belong to qualified information security professionals working with current information, and not to the author of this document.

What it contains is structure: activation, authority, continuity, communication and recovery. That is emergency management, and it is the part that can be written from outside and adapted locally.

The author's emergency management career was forged in the aftermath of the 1998 Great Ice Storm, when dozens of Ontario communities declared emergencies, and she was part of the provincial response. That storm was the beginning of Ontario rebuilding municipal emergency management from the ground up, and the requirements this package cites were in place by December 2004. That was many years ago, and she has not kept current since. The people doing this work today know things she does not, their guidance is authoritative and this package is not, and where the two disagree you should follow theirs. For current advice, start with your own municipality's Community Emergency Management Coordinator, a mandatory appointment under Ontario Regulation 380/04, and with Emergency Management Ontario, within the Ministry of Emergency Preparedness and Response.

The account of the July 2026 incident is drawn from the independent investigation conducted by METR and Redwood Research and published on 26 August 2026, and from the primary essay of 12 September 2026. Both should be consulted directly before the detail is repeated.

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cost, under no licence restriction beyond attribution, to any municipality, agency or organization that finds it useful. Take all of it, part of it, or none of it.

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