

Municipal Coordination

Applying Shared Operational Infrastructure to Communities

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Executive Summary

Communities have always depended on networks of organizations to keep people safe and essential services running. Public agencies, private companies, nonprofit organizations, utilities, contractors, healthcare providers, regional partners, and others work together every day to deliver services and respond to changing conditions. As these networks become larger and more interconnected, resilience depends not only on the capabilities of individual organizations, but also on their ability to coordinate effectively before, during, and after disruption.

Over the past several decades, municipalities have invested heavily in software that improves the operations of individual departments and organizations. Records management systems, dispatch platforms, GIS, incident-management software, asset systems, communications platforms, and other applications perform important functions within their respective domains.

The recurring challenge appears between them.

Effective coordination requires more than knowing what is happening. Participants also need to know which organizations are involved, who represents them, what capabilities and resources they can provide, what roles and authority they hold, what information may be shared, what has been requested or assigned, who owns the next action, and what the current operational status is.

Today, much of this shared operational context is still assembled through email, spreadsheets, shared drives, phone calls, liaison relationships, and institutional knowledge. During routine operations, those methods often work. During major incidents, when organizations and conditions change rapidly, the burden of maintaining a current shared picture increases substantially.

The opportunity is to make the operational network itself more persistent and usable before it is needed.

Cities Operate Through Networks

Cities operate through networks of independent organizations.

Every day, municipal governments coordinate among police, fire, EMS, public works, utilities, transportation providers, healthcare organizations, educational institutions, contractors, nonprofit organizations, private companies, neighboring jurisdictions, state agencies, federal partners, and others.

These organizations remain independently governed. Each has its own leadership, personnel, responsibilities, systems, data, and operating procedures. Yet many important municipal outcomes depend on their ability to act together.

The network also changes continuously. Personnel rotate. Vendors change. Capabilities expand or disappear. Agreements are renewed. Equipment moves. Organizations join or leave. New partners become relevant as circumstances change.

For decades, municipalities have successfully built systems that manage the operations of individual organizations. The operational network connecting those organizations, however, has remained only partially represented in software.

Coordination Requires More Than Communication

The challenge is not that organizations cannot communicate.

Cities already have radios, phones, email, messaging platforms, emergency operations centers, liaison structures, and formal incident-management processes. These capabilities are essential and should remain so.

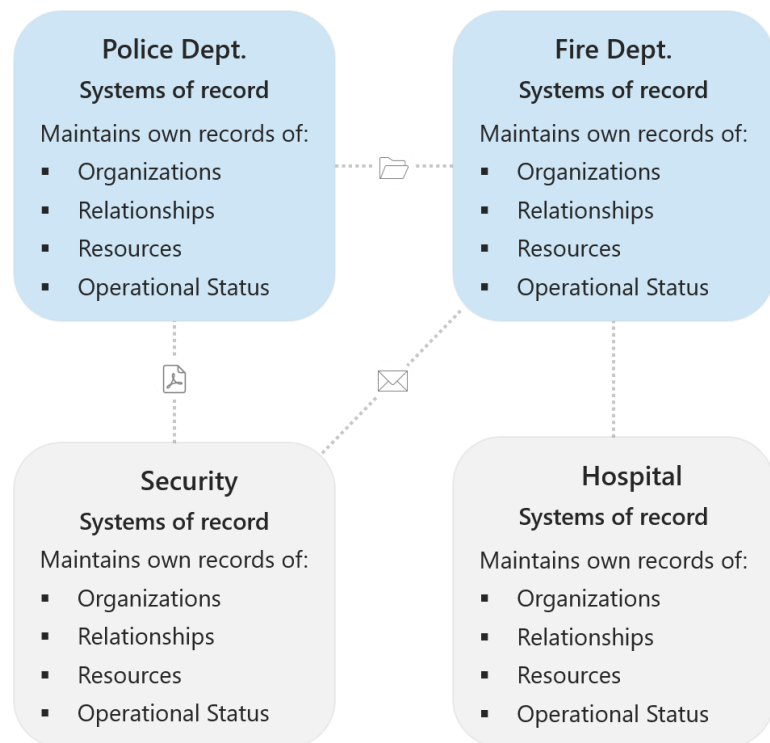
The harder problem is maintaining the information and relationships required to make that communication useful.

When organizations need to work together, participants must answer practical questions such as:

- Which organizations are involved?
- Who currently represents them?
- What capabilities can they provide?
- What personnel or resources are available?
- What authority or role does each participant hold?
- What information may be shared?
- What has been requested, assigned, or committed?
- Who is responsible for the next action?
- What is the current status?

Collectively, this information describes the **shared operational state** of the network.

Much of it already exists somewhere. A fire department may know the status of its apparatus. A hospital may know its staffing levels. A contractor may know its available personnel. An emergency-management office may know which agencies are activated. A logistics system may know the status of a resource request.



The difficulty is maintaining a current, trusted understanding of those facts across organizational boundaries.

As operational networks grow, so does the burden of reconciling them.

The Missing Layer

This challenge does not originate from inadequate software. It reflects how enterprise and public-sector technology evolved.

Most systems were designed around a specific organization, function, or operational object.

Human resources systems manage employees. Asset systems manage equipment. CAD systems manage calls and dispatch. GIS platforms manage location-based information. EOC and incident-management applications coordinate events. Communications systems transmit messages and alerts.

Each performs an important role.

The recurring gap appears where work crosses organizational boundaries.

No single participant naturally owns the complete operational relationship between independent organizations: who represents each party, what each can provide, what information may be shared, what requests or commitments are active, and how that state changes over time.

As a result, this context is often maintained through general-purpose collaboration tools and human relationships rather than as persistent operational infrastructure.

Recent after-action reviews from major emergencies in Los Angeles, Maui, and Oregon repeatedly document the consequences. Strong performance was associated with established relationships, liaison structures, clear roles, shared information products, and formal resource processes. At the same time, the reports documented recurring friction around personnel and resource status, requests and tasking, authority and ownership, information provenance, and the rapid integration of outside partners.

The pattern is narrower than a lack of situational awareness.

A city can improve its understanding of *what is happening* while still struggling to maintain a shared understanding of *who is doing what, with which resources, under whose authority, and with what current status*.

Maintain the Network Before It Is Needed

The strongest operational networks are not created during a crisis.

They are built beforehand.

In steady state, a persistent operational network could maintain:

- participating organizations;
- designated representatives and liaisons;
- organizational relationships and agreements;
- capabilities and resources;
- permissions and information-sharing rules;

- readiness requirements;
- jurisdictional or operating context; and
- shared history.

The objective is simple: when organizations need to work together, they should not have to reconstruct this foundation from scratch.

This also strengthens institutional resilience. When a liaison changes jobs or an experienced administrator retires, the operational relationship should not disappear with that person. The network should retain the relevant context, history, and responsibilities needed for the next person to continue the work.



Cross-Organizational Applications

Resource Coordination • Mutual Aid • Workforce Coordination • Procurement • Future Applications...

Rather than each organization maintaining its own incomplete representation of the network, shared operational infrastructure enables a persistent operational network that provides trusted participants with a common operational foundation while preserving each organization's existing systems of record.

Activate the Same Network When Coordination Is Required

When a city or one of its partners needs support, the same operational foundation can become active.

A typical coordination process may involve:

need → request → validate → route → approve → source → commit → assign → deploy → update → fulfill → close

Different organizations may legitimately own different steps.

The challenge is ensuring that everyone who depends on the workflow can see the current state of the parts relevant to them: what was requested, who approved it, who committed resources, what has been assigned, what remains outstanding, and who owns the next action.

This is where shared operational infrastructure becomes more than a directory or contact list.

A municipality could identify which partners possess a required capability, route a request through established authorities, receive commitments, track current status, and preserve the resulting history without requiring every organization to abandon the systems it already uses internally.

The same model can support mutual aid, public-private coordination, planned events, surge response, contractor support, and other situations in which independently governed organizations must act together.

A Different Kind of Infrastructure

Lorica was developed around this model.

Rather than replacing existing municipal software, Lorica is designed to provide a persistent shared foundation for the operational network itself.

Existing systems remain authoritative for the information they already manage. A department's personnel system remains authoritative for its workforce. An asset system remains authoritative for equipment. CAD and incident-management systems continue managing active operational workflows. GIS remains authoritative for location-based information.

Lorica connects those environments by maintaining the relationships, permissions, capabilities, readiness, shared context, and cross-organizational workflow state that no single participant's system fully owns.

A useful shorthand is:

Systems of record manage organizations and resources.

Operational applications manage specific functions and incidents.

Lorica manages the network between them.

Information remains under the control of the organizations that own it and is shared according to established permissions.

The objective is not to centralize municipal operations in a single application. It is to make the operational network itself persistent, visible, and usable across the systems organizations already trust.

What Shared Operational Infrastructure Makes Possible

The immediate value is practical.

Organizations spend less time determining who to call, what a partner can provide, whether a request has been fulfilled, or who owns the next step. Outside partners can be integrated more quickly. Institutional knowledge becomes less dependent on individual people. Resource and mission state becomes easier to reconcile across organizational boundaries.

Over time, the same foundation can support a broader class of cross-organizational applications.

Resource coordination can draw on existing partner relationships and capabilities. Mutual-aid workflows can use established permissions and readiness information. Public-private partners can participate without joining the same internal software environment. Future applications can begin with an existing operational network rather than recreating the same organizations, relationships, permissions, and context for every new workflow.

The deeper value of shared operational infrastructure is therefore not simply more accurate information.

It is a greater capacity for organizations to coordinate safely and effectively across institutional boundaries.

Looking Ahead

Throughout history, communities have invested in infrastructure that allows people, goods, water, electricity, and information to move more effectively. As society becomes increasingly interconnected, another form of infrastructure is becoming increasingly important: the infrastructure that enables organizations to coordinate across institutional boundaries.

The communities best prepared for tomorrow's challenges will not necessarily be those with the most software. They will be those whose operational networks are ready before disruption occurs and capable of adapting when circumstances change.

Communities have always depended on networks of organizations to achieve what no single institution could accomplish alone. As those networks continue to grow in scale and complexity, strengthening the infrastructure that supports them may become one of the defining opportunities in the next generation of municipal innovation.