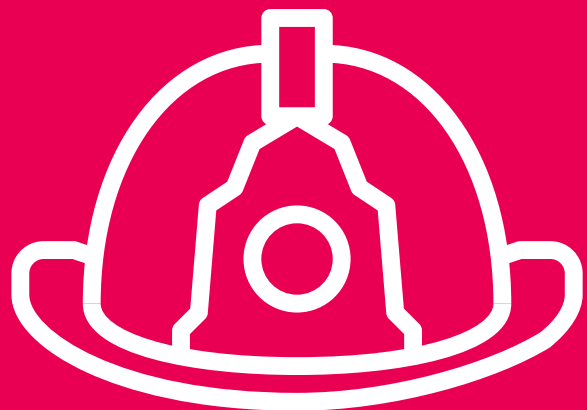noggin

Guide to Understanding the Benefits of a Virtual Emergency Operations Center

The inherent constraints of the physical emergency operations center

The Emergency Operations Center (EOC) has become a staple in emergency management and public safety, and it's easy to see why. A physical (or, increasingly, mobile) hub where Emergency and Incident Management teams coordinate information and resources during low-frequency, high-risk incidents, the EOC supports incident management activities, up to and including on-scene operations.

The very utility of the approach explains why physical EOCs, in particular, fixed, brick-and-mortar facilities, have proliferated in recent years, not just among government organizations and traditional disaster relief agencies, but in for-profit businesses, as well. After all, physical EOCs help teams, individual organizations, and multiple agencies working in concert mobilize people and equipment for incident responses lasting the entirety of an emergency.

Despite their clear benefit, though, physical EOCs aren't a cure-all, especially when it comes to effective lifecycle management. The limitations with a solely physical EOC set up are borne out in the case evidence. It turns out that physical EOCs aren't always effectively used during trainings and exercises, nor is the use of standardized incident command systems always critically evaluated within the EOC[i]. It's also not uncommon that organizations don't have anywhere, anytime access to key resources, such as exercise and debriefing guides produced by national emergency organizations, a key prerequisite for success in an emergency response scenario[ii].

It turns out that physical **EOCs** aren't always effectively used during **trainings** & **exercises**[i]

Anytime, anywhere access to critical information with a virtual EOC

What's going on here? Meeting incident response objectives often requires more efficient measures than physical EOCs can facilitate. That doesn't mean dispensing with physical EOCs altogether – far from it – instead supplementing integrated emergency management practices with a virtual emergency operations center.

Indeed, conditions on the ground demand it. Emergency managers must now contend with a marked increase in emergencies, especially weather-related disasters with the number of mass casualty-causing disasters quadrupling to around 400 a year since 1970[iii]. Not just natural disasters and catastrophes, either. Relatively newer threats, like terror and cyber incidents, are increasingly taxing emergency resources.

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And it's this shifting context, more than anything, that's forcing a major reevaluation of how to achieve traditional EOC objectives, goals like establishing a common operating picture, facilitating long-term operations, improving continuity, providing ready access to all available information, simplifying information analysis and verification, and promoting resource identification and assignment.

Meeting those objectives has traditionally meant undertaking the following core EOC functions:

Coordination.
Inter-agency coordination as well as capability and resource management; NIMS, in particular, requires that the communications and information management systems for all EOCs must be deployed with due consideration to the interoperability and redundancy of systems.

Policy-making.
Creating broad-reaching policies.

Operations.
Direction of all incidental tactical operations required during the disaster response.

Information-gathering.
Determining the nature and extent of disaster conditions, including damage assessment.

External communication.
Informing relevant publics, including the media.

But now, many of the critical events that physical EOCs have been set up to manage can be handled virtually and/or digitally (often to better effect). In fact, organizations that have developed virtual Emergency Operations Centers (for mobile impact teams or others) in addition to traditional brick and mortar EOCs tend to use the former more extensively than the latter. The University of Oregon, for instance, uses its virtual emergency operations center around 12 times a year, while it only uses its physical EOC twice[iv].

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What accounts for the differential? Well, virtual Emergency Operations Centers have taken full advantage of the profusion of digital technologies (mobile, cloud-based platforms, video, incident management dashboards, geographic information systems, etc.) to create a modern emergency management solution that facilitates data-driven response to major incidents.

So too have physical EOCs, you'd be right to counter. But the key difference is that virtual EOCs have been purposefully set up to enable **anywhere**, **anytime access** to all available incident management tools and information; often, only a user name and password are needed.

Virtual EOCs have been purposefully set up to enable **anywhere**, **anytime access**

You see, today's Emergency/Incident Management practitioners must be able to process and effectively distribute information from any number of sources, at any point during the lifecycle of an emergency. A virtual EOC gives practitioners the ability to share critical resources, continuity data, and important reports on a unified platform that senior leadership can log in to, as well. This digitization of information management, in particular, helps teams establish a common operating picture.

Other EOC objectives are achievable by teams once situational awareness has been achieved. Case in point: for-profit and non-for-profit organizations who've given virtual EOC access to city emergency management staff find that it accelerates multiagency collaboration – relevant people come to the table sooner without a geographical barrier to entry – and keeps everyone with access to the virtual EOC on the same page throughout the response.

Further, since virtual EOCs improve information sharing, they require fewer administrative resources. In contrast, physical EOCs take large staffs to maintain, teams often comprising of highly-qualified practitioners who could otherwise be at the disaster site. That's no reason to jettison fixed facilities (or mobile EOCs) altogether[v]. Instead, a mixed physical/virtual approach can help better maximize resources, so that the right people get access to crucial information without having to step away from where they're needed.

Technical capabilities to enable efficient operations at a Virtual EOC

So, then, what are some technical capabilities Emergency Management teams should be scouting out in order to enable virtual EOC operations? First things first. Nothing improves modern incident coordination more than system flexibility. Unfortunately, that's where a lot of integrated emergency management solutions fall down: they only offer advanced functionality in discrete mission areas.

Instead, virtual EOC teams need to be able to manage all information, communications, plans, and tasks within a single, flexible platform. Specific features to improve communication and facilitate collaboration include alerts, dashboards, and collaboration spaces for teams, as well as notifications and updates via email, SMS, voice, or in app.

What's more, software that supports a virtual EOC must necessarily provide situational awareness for each critical event – bonus points for steady-state operations, as well. And therefore, the solution should be able to transmit intelligence from diverse sources and methods, including field personnel, data and GIS feeds, email, and SMS. That intelligence will facilitate informed decision making, whether those decisions come from the field or the brick and mortar EOC.

Finally, best-practice solutions will provide comprehensive dashboards for events and operations, as well as integrated, map-based functionality for visualizing the locations of incidents, risks, people, and assets. In fact, some solutions even come pre-configured with best-practice incident templates, forms, dashboards, and assets specifically for Emergency Operations Centers. That means much of the work is completed, right out of the box, so that Emergency teams can activate best-practice EOCs quicker than ever. The final result: a virtual hub for your emergency operations where you can better coordinate information and resources when it matters most.

Citations

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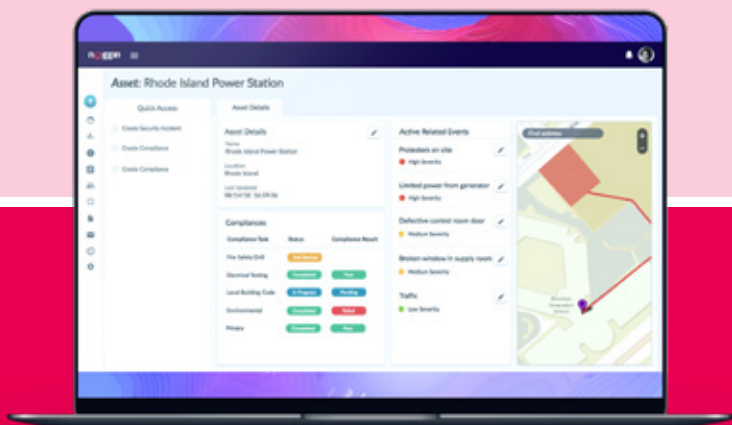
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