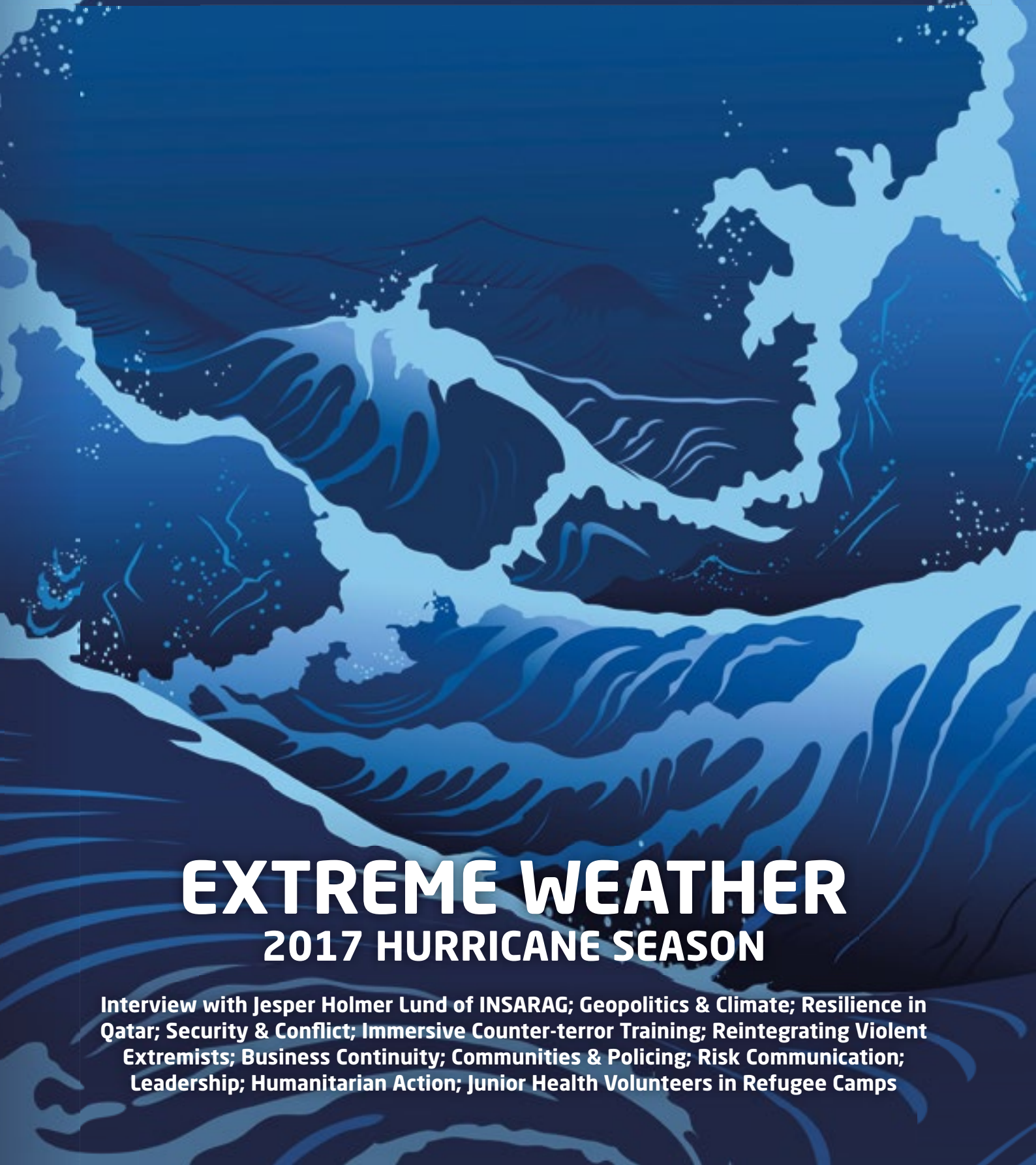
CRISIS ▸ RESPONSE

VOL:13 | ISSUE:1 | OCTOBER 2017 WWW.CRISIS-RESPONSE.COM JOURNAL

PROTECTION | PREVENTION | PREPAREDNESS | RESPONSE | RESILIENCE | RECOVERY



EXTREME WEATHER

2017 HURRICANE SEASON

Interview with Jesper Holmer Lund of INSARAG; Geopolitics & Climate; Resilience in Qatar; Security & Conflict; Immersive Counter-terror Training; Reintegrating Violent Extremists; Business Continuity; Communities & Policing; Risk Communication; Leadership; Humanitarian Action; Junior Health Volunteers in Refugee Camps

Surface transportation as second circle adopter

Nicholas B Hambridge, **Arnold M Howitt**, and **David W Giles** continue this series looking at the implementation of NIMS by analysing how far it has been adopted by transportation agencies in the United States

In Part 1 of this article we described the origin and adoption of the National Incident Management System (NIMS) in the US and explored factors related to its successful implementation by agencies subject to the congressional mandate.

In many studies of NIMS implementation, analysts have focused on first response organisations, such as police, firefighters, and EMTs. If emergency response is to operate as a substantially integrated system in major crises, however, it is crucial that not only first responders, but also others who will be involved should be ready and able to use NIMS effectively.

As an example, the US Department of Transportation (USDOT) is the co-lead in the Critical Transportation Core Capability under the National Preparedness Goal and the lead agency in 'Emergency Support Function #1: Transportation' under the National Response Framework. Many of USDOT's sister agencies lead their states' equivalents. However, transportation agencies do not regard emergency response as their primary mission and therefore may engage NIMS in different ways or treat it as a less significant requirement than traditional first response organisations.

To explore how NIMS implementation is progressing in transportation agencies, we conducted a set of in-depth interviews with transportation agency emergency management and security officials.

We focused on a non-random sample of city and metro transportation agencies representing a geographic mix of transportation agencies. We also interviewed the corresponding state-level transportation agencies for these metro areas in order to understand the interplay between these two levels, as well as to learn if there were differences in NIMS implementation results at the state and metropolitan agency levels. Finally, we interviewed officials from the USDOT and the US Department of Homeland Security, including FEMA, to provide a federal level perspective. In all, the research team conducted interviews with 12 city, metro, or state-level transportation agencies in five states and with two federal agencies between October 2013 and February 2016 (see Figure 1).

While NIMS implementation efforts began in most of the transportation agencies interviewed soon after the official NIMS framework was issued in 2004, some agencies had been using the Incident Command System (ICS)-component of NIMS much earlier. Transportation agencies in Illinois were using ICS at least as far back as 1994. California, the birthplace of ICS in the 1970s, developed the Standardised Emergency Management System (SEMS), including ICS, and mandated its use in 1993 for all multiagency and multi-jurisdictional responses. Therefore, California agencies like the state-level Caltrans and the Los Angeles County Metropolitan Transportation Authority (LA Metro) were already familiar with ICS when NIMS came into being. Overall, the transportation agencies interviewed that had experience with components of NIMS – most notably ICS – prior to the NIMS mandate, generally found implementation easier than those that did not.

In terms of actual use of NIMS, the interviews revealed a range of practices and experiences. At one end of the spectrum, the Florida Department of Transportation's (FDOT) central Emergency Management (EM) office aligns itself as closely as possible with NIMS/ICS's command structure at all times, both during incident

City/Metro	State
Massachusetts Bay Transportation Authority (Boston, MA)	Massachusetts Department of Transportation (MassDOT)
SunRail (Orange County, FL)	Florida Department of Transportation (FDOT)
SunTran (Ocala, FL)	
Metropolitan Transit Authority of Harris County (Houston, TX)	Texas Department of Transportation (TxDOT)
VIA Metropolitan Transit (San Antonio, TX)	
Los Angeles County Metropolitan Transportation Authority (Los Angeles, CA)	California Department of Transportation (Caltrans)
Chicago Transit Authority (Chicago, IL)	Illinois Department of Transportation (IDOT)
Federal	
United States Department of Transportation (USDOT)	
United States Department of Homeland Security (DHS): – Federal Emergency Management Agency (FEMA) – Office of Intergovernmental Affairs	

Figure 1: Transportation and emergency management agencies participating in this study

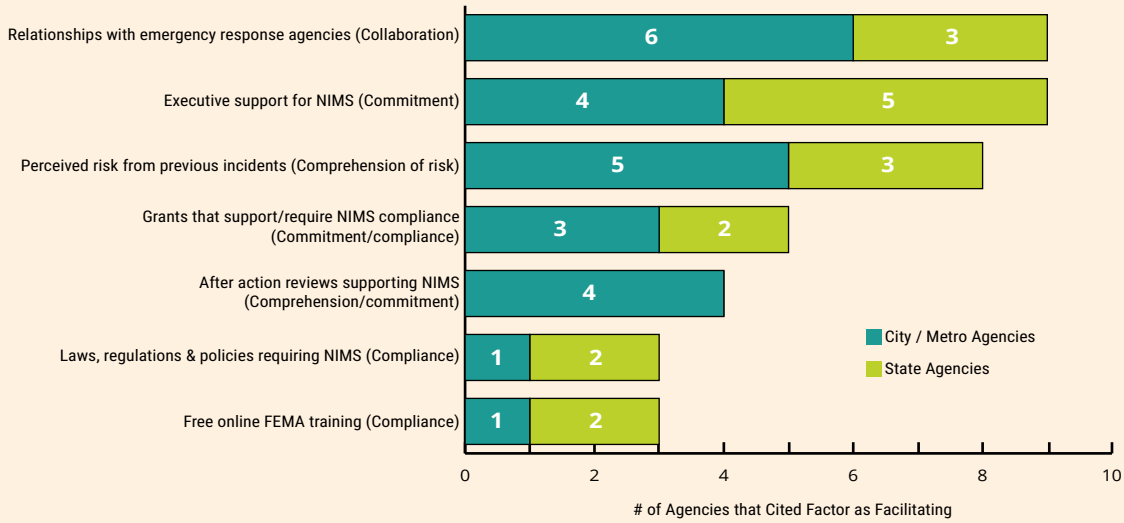


Figure 2. Factors facilitating NIMS implementation in transportation agencies

responses as well as in day-to-day, non-emergency activities. This is reflected in the organisational structure of the FDOT Emergency Management office and in the regular position titles of its staff, which also correspond to ICS position titles – eg Operations Chief and Logistics Chief. While FDOT's central EM office strictly follows ICS, decentralised authority among its seven districts and the turnpike authority creates varying levels of adherence to ICS. In contrast to FDOT's central EM office, the Emergency Management group that serves both the Massachusetts Department of Transportation (MassDOT) and its metro Boston transit service, the Massachusetts Bay Transportation Authority (MBTA), indicates less stringent adherence to NIMS/ICS by using the 'philosophy of ICS' (eg the principle of unity of command and common terminology), but not necessarily the exact ICS structure during emergency responses or day-to-day activities.

For the most part, the transportation agencies interviewed did not use NIMS on a day-to-day basis, but almost always used it during incident responses that required engagement with first responders and other external organisations. For emergency incidents that did not require interaction with external responders, there was a mixed response (roughly split evenly) on whether or not the transportation agencies used NIMS/ICS. Those that did not use NIMS/ICS in these situations used internally developed structures and procedures until outside agencies became involved. At that point, the transportation agencies indicated they were able to transition to NIMS/ICS, although some noted difficulty in this transition.

The interview respondents most often cited a state or locality's emergency operations centre (EOC) as the location where their agencies utilised NIMS – more often than saying that they used NIMS/ICS at the actual scene of incidents. An EOC is typically activated during an emergency by the affected municipality at a location away from the incident scene, where multiple agencies and organisations come together to provide co-ordinated support to the operations occurring at the scene(s) of the incident.

Under NIMS and ICS, the incident commander at the scene of the emergency maintains command and control of response decisions and actions even when an EOC is activated. This on-scene command principle of NIMS/ICS is in tension with typical practices in the transportation sector, particularly in mass transit agencies. During routine, non-emergency operations, a central transit control centre is usually in active command of the entire transit system instead of this authority being decentralised to in-the-field personnel.

When asked what had been most important to the success of their NIMS implementation efforts (see Figure 2), many interviewees first referenced commitment and support for NIMS from their agencies' executive leadership, especially their chief executives. The executives' motivations for this support tends to be based on: A perceived need to comply with state or federal legal/regulatory requirements; and/or a perception that their agency was sufficiently vulnerable to risks or threats to warrant strengthening its emergency system.

But interviewees also frequently mentioned that getting high-level commitment for NIMS has proven difficult because neither NIMS nor the agency's overall emergency management programme are seen as mission-critical by others within the organisation. Dedicating funding, staff, and other assets to emergency preparedness, rather than to core operational tasks like transporting customers and maintaining equipment, has proved a hard sell for these resource-constrained agencies.

External collaboration with first circle response organisations is also critical to transportation agencies, especially to the city and metro transportation agencies. These rely most heavily on local and state emergency management agencies for support with NIMS implementation, since these agencies typically provide guidance and monitor NIMS compliance as a whole within their respective jurisdictions. Emergency management agencies also typically provide a significant number of free, classroom-based NIMS trainings to area emergency responders.

Transportation agencies also referred to a number of other external groups with whom they collaborated on NIMS-related activities. Those most often cited, aside from emergency management agencies, were law enforcement (police, sheriff, highway patrol), fire departments, FEMA, the Federal Transportation Security Administration (TSA), other transportation agencies, hospitals and EMS,

in that order. The most beneficial collaborations with these and other groups, in terms of improving NIMS proficiency, were multiagency drills and exercises.

While simulated incidents – ie drills and exercises – give responders a glimpse of the situations in which NIMS would be needed, actual emergencies tend to make the point more dramatically. Many interviewees talked about how their agencies tended to take emergency preparedness and NIMS implementation more seriously after being involved in large-scale incident responses.

From the Texas agencies recounting their experiences during hurricanes Katrina and Rita (2005) and Ike (2008), to IDOT and the Chicago Transit Authority (CTA) describing Illinois' harsh winter storms, to the MassDOT/MBTA remembering the traumatic events surrounding the 2013 Boston Marathon bombings, many interviewees explained how the perception of their agencies' exposure to disasters pointedly increased in the face of a major emergency – and with it came a revitalised dedication to the agency's emergency management programme overall.

Funding issues also loom large (see Figure 3). In the years closely following the terrorist attacks on the US in 2001, when homeland security grant funding was more readily available than it has been more recently, transportation agencies were able to use federal emergency preparedness funding primarily through the TSA's Transit Security Grant Program for NIMS implementation activities. Transportation agencies used this funding predominantly for training and exercises, specifically to cover overtime costs or 'backfilling' costs – ie having other employees cover the work that the trainees/exercise participants would have done. However, grant funding has diminished significantly in recent years, and transportation agencies have not been able to make up for this loss through internal budgets.

Even for agencies committed to implementing NIMS and having the resources to do so, attainment of this goal can prove elusive when compliance standards are unclear or unavailable. All the agencies interviewed stated that they had implemented NIMS, but there was wide variation in the criteria by which each agency judged itself to be 'NIMS compliant'.

FEMA has developed NIMS implementation guidelines, beyond just training compliance, for different levels of government (federal, state, tribal, local) and for the NGO and private sectors as a whole. It has also developed guidelines specific to healthcare, but it has not developed NIMS specific standards – specific requirements necessary for compliance – for the transportation sector or other outer circle disciplines.

FEMA, moreover, only tracks NIMS compliance at the state level, and only some states have developed or track compliance standards at the discipline or agency level. With no authoritative set of compliance standards to follow, transportation agencies are implementing standards derived from various outside sources or deciding on their own what it means to be NIMS compliant.

The DHS/FEMA-sponsored NIMS training programme was the measure of compliance most often raised by the transportation representatives. The NIMS core curriculum is made up of a series of online and in-class courses designed to provide emergency response personnel with key information on all components of NIMS, with an emphasis on ICS. Baseline training provides preliminary information and is intended for all responders, while advanced courses are aimed at responders in leadership positions or responders in jurisdictions at greater risk for complex incidents, based on hazard/threat analyses. Some interviewees saw the training, especially the online courses, as valuable resources in their NIMS implementation toolkits. Others saw it as too generic and instead developed internal courses customised to the field of transportation and/or to their specific agencies.

The fact that all agencies interviewed have implemented NIMS to some degree indicates that NIMS is becoming embedded in the transportation sector and will help it contribute to the multi-disciplinary incident management system needed to respond to large and complex disasters. At the same time, several issues within these agencies as well as with NIMS itself, if not addressed, could slow or block NIMS' progress within the sector. That issue will be explored in Part 3 of this series. CRJ

■ *A longer version of the research reported here appears in* Co-ordination in Crises: Implementation of the National Incident Management System by Surface Transportation Agencies, Homeland Security Affairs 13, *Article 3 (March 2017); https://www.hsaj.org/articles/13773*

■ *Development of this paper was supported by the New England University Transportation Center with funds from the US Department of Transportation's University Transportation Centers programme. Additional support was provided by the Ash Center for Democratic Governance and Innovation, the Taubman Center for State and Local Government, and the Program on Crisis Leadership – all of the John F Kennedy School of Government at Harvard University*

Authors

NICHOLAS B HAMBRIDGE *is Associate Director of Risk & Compliance Services at Harvard University and previously served as Harvard's Associate Director of Emergency Management, where he oversaw the university's emergency planning, preparedness, response, and recovery activities.*

ARNOLD M HOWITT *is Faculty Co-Director of the Program on Crisis Leadership (PCL) and Senior Adviser of the Ash Center for Democratic Governance and Innovation, both at the John F Kennedy School of Government, Harvard University. He is a Member of* CRJ*'s Editorial Advisory Panel.*

DAVID W GILES *is the Associate Director and Senior Research Associate of the Program on Crisis Leadership at the John F Kennedy School of Government, Harvard University*

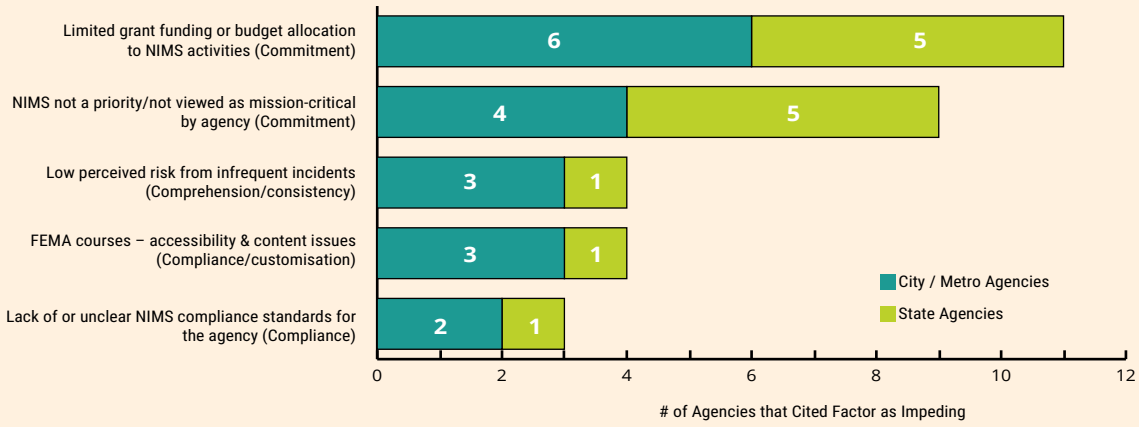


Figure 3. Factors Impeding NIMS Implementation in Transportation Agencies

Internal and external factors, affecting NIMS implementation

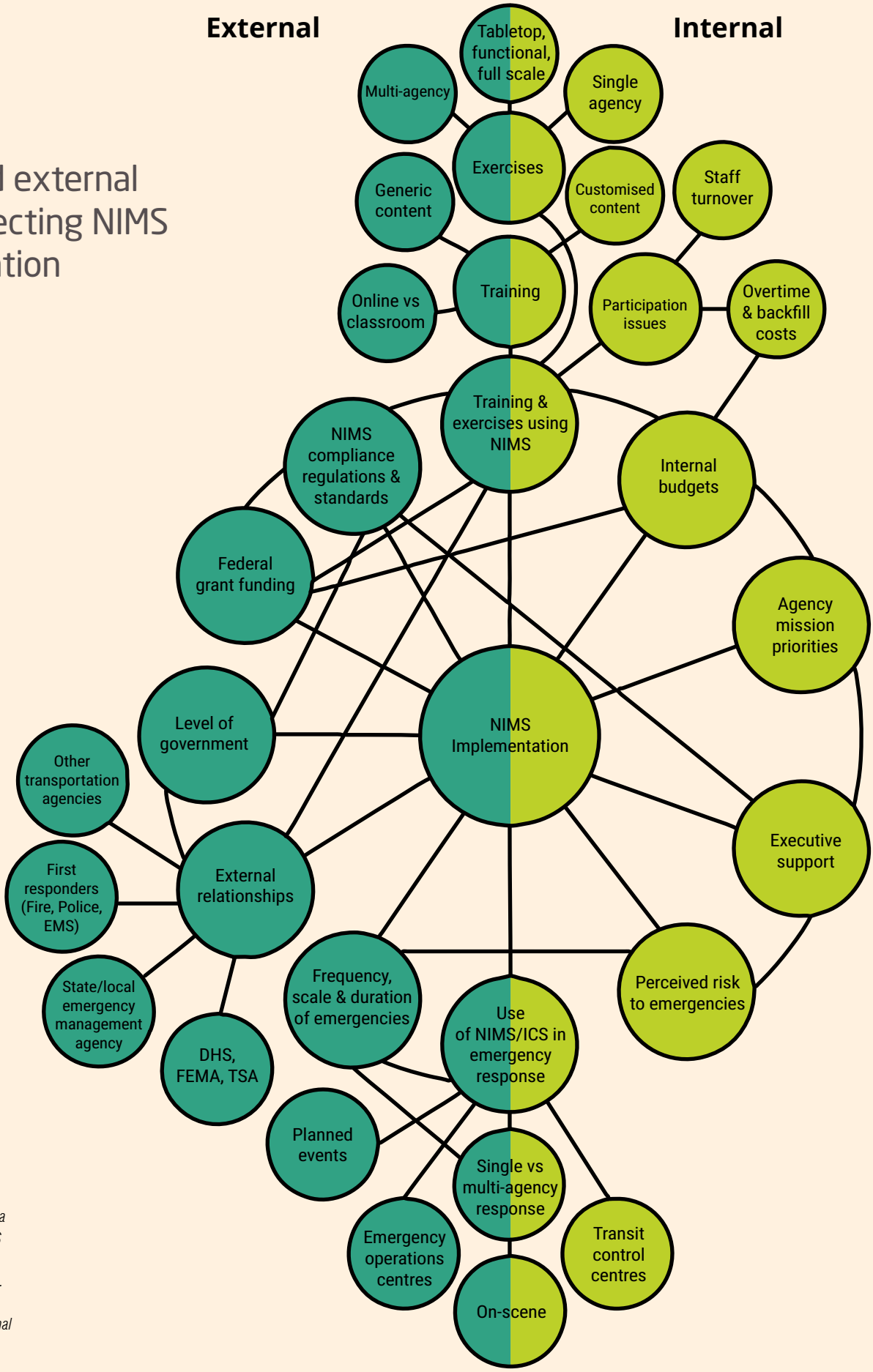


Figure 4 presents a graphical representation of inter-relationships revealed both by a review of literature about NIMS implementation and by the authors' exploratory interviews. This diagram characterises the variables as internal and external factors and shows how they affect NIMS implementation