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Virtual Small Business Emergency Operations Center (VSBEOC): Shared Awareness and Decision Making for Small Business

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14. ABSTRACT The Secretary of the U.S. Department of Homeland Security (DHS) stated "Ensuring America's small businesses have the critical information and training they need to better respond to disasters will strengthen the entire nation's preparedness and resilience." To address this need DHS created the Voluntary Private Sector Preparedness Accreditation and Certification Program (PS-Prep)(Napolitano, 2010). PS-Prep is designed to provide business continuity guidelines to small business owners. The program does little to provide shared awareness across that community. This research utilizes the PS-Prep, and the established framework of a Business Emergency Operations Center (BEOC) to establish a model for a Virtual Small Business Emergency Operations Center (VSBOEC) (New Jersey Institute of Technology, 2009) (New Jersey Business Force, 2010). The VSBOEC will provide the small business community with access to a collaborative environment where critical information can be shared and processed thereby improving the community's situational awareness and enabling a more efficient and effective recovery from business interruption.					
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ABSTRACT

The Secretary of the U.S. Department of Homeland Security (DHS) stated “Ensuring America's small businesses have the critical information and training they need to better respond to disasters will strengthen the entire nation's preparedness and resilience.” To address this need DHS created the Voluntary Private Sector Preparedness Accreditation and Certification Program (PS-Prep)(Napolitano, 2010). PS-Prep is designed to provide business continuity guidelines to small business owners. The program does little to provide shared awareness across that community. This research utilizes the PS-Prep, and the established framework of a Business Emergency Operations Center (BEOC) to establish a model for a Virtual Small Business Emergency Operations Center (VSBEOC) (New Jersey Institute of Technology, 2009) (New Jersey Business Force, 2010). The VSBEOC will provide the small business community with access to a collaborative environment where critical information can be shared and processed thereby improving the community’s situational awareness and enabling a more efficient and effective recovery from business interruption.

Keywords

Emergency Operations Center (EOC), Business Emergency Operations Center (BEOC), Business Continuity, Incident Command

INTRODUCTION

Business continuity planning is a significant growth area for the emergency management community (Haddow, 2008). The devastating impacts of September 11 resulted in increased coordination and cooperation between business and emergency managers (Haddow, 2008). Today, business continuity in the private sector is synonymous with emergency preparedness in the public sector. Both public and private sectors are preparing to respond to and recover from a possible future disaster. Private sector organizations would seek to recover in order to begin making money again while public sector organizations would seek to restore critical infrastructure in order to provide security and restore critical infrastructure for their communities.

In the public sector, size matters. Small towns and villages rely heavily on mutual assistance from adjacent communities as well as county and state resources. Larger towns and cities are able to provide for the majority of their own emergency response. Similarly small businesses rely heavily on the public sector for emergency response and large private organizations have become self reliant in their abilities to respond to even complex disruptions and disasters. Unlike the public sector where small towns and villages rely on neighboring larger towns and cities for assistance, large private sector organizations do not provide assistance to their neighboring small organizations.

In October of 2007 the Federal Emergency Management Agency (FEMA) established a Private Sector Division with the purpose of cultivating and advocating for collaboration between the U.S. private sector and FEMA, to support FEMA’s capabilities and to enhance national preparedness, protection, response, recovery, and mitigation of all hazards (FEMA PSD, 2011).

In 2010 Department of Homeland Security (DHS) Janet Napolitano made two key announcements of programs designed specifically for small business:

1. June 15, 2010 - Voluntary Private Sector Preparedness Accreditation and Certification Program (PS-Prep) Resource Center (FEMA PSD, 2011).
2. September 30, 2010 – a key milestone in the Department’s efforts to develop a robust small business preparedness plan – soliciting public comment on a private sector readiness certification program specifically tailored to the needs of small businesses (Napolitano, 2010).

New Jersey Institute of Technology (NJIT) developed, implemented and continues to improve a Business Emergency Operations Center (New Jersey Institute of Technology). The BEOC is a Private sector organized, managed, and staffed emergency coordination/operations center focused on all-hazards disaster prevention, preparation, response, and recovery (New Jersey Institute of Technology, 2009). The BEOC has proven to be a valuable collaborative environment where business members build a shared awareness of current incidents and an increased situational awareness during disasters. Currently the BEOC does not have any small business organizations as members.

This research will build on the current research which evaluated the applicability of PS-Prep to adequately address the needs of small businesses (Bell, 2011). It will also build upon the successes of the BEOC and leverage current BEOC technology to bring the same successes to the small business community (New Jersey Business Force, 2010). The VSBEOC will provide small businesses with better shared awareness through alerts and notifications. It will also provide the resources necessary to build, maintain, and access reliable business continuity plans in order to properly respond to business outages.

PS-Prep

Private sector organizations that do not rise to the current complex challenges of business continuity management are at risk of disruptions and failures that may significantly affect their ability to stay in business (Davis, n.d.). This statement is true but it is also misleading. It is misleading because it implies that every private sector organization has the means to rise to the complex challenges of business continuity management. Small businesses in general do not possess the means to appropriately prepare for the response and recovery from a complex event. Small businesses do not have the staffing, financing, or the infrastructure to meet the current complex business continuity challenges.

“Ensuring America’s small businesses have the critical information and training they need to better respond to disasters will strengthen the entire nation’s preparedness and resilience (Napolitano).” PS-Prep, specifically ASIS SPC.1-2009, was evaluated to determine its applicability to adequately address the needs of small business owners (ASIS, 2009) (Bell, 2011). In short, PS-Prep fails to address many of the needs of the small business community. Below is a list of statements from PS-Prep which are not applicable to small businesses:

1. Organizations should identify and establish relationships with public sector agencies... Arrangements should be made for communication and warnings internally and externally for normal and abnormal conditions (PS-Prep, 2010).
2. Public Sector organizations required to respond to emergencies do not have the time or the resources to collaborate on a continual basis with a large number of organizations.
3. A primary Crisis Management Center (CMC) should be identified in advance. This is the initial site used by the Crisis Management Team and Response Teams for directing and overseeing crisis management activities (PS-Prep, 2010). How many small businesses have the staffing and the budget to implement a primary Crisis Management Center? How many have the resources to have a secondary CMC? Ps-Prep also states that all emergency response personnel should perform crisis management duties as part of their normal work duties. How many small businesses have the budget to pay personnel during a time when they are not making any money?
4. Testing the Business Continuity Plan. Many small businesses can't shut down their operations to perform valid tests of their response plans. Remember, emergency plans are tested on a continuous cycle as depicted in the FEMA Preparedness cycle (FEMA 2011) see Figure 1.



Fig. 1 FEMA Preparedness Cycle

5. There are a number of other areas of this plan, monitoring and measurement, evaluation and compliance, audits, and management review that inhibit its applicability to small businesses.

The ASIS SPC.1-2009 document is the primary document of the PS-Prep program. The program was developed and distributed by FEMA and yet it is not compatible with the National Incident Management System (NIMS) and therefore not compatible with the Incident Command System (ICS) (ASIS, 2009) (US DHS, 2008). These systems NIMS and ICS are the national standards for emergency management as directed by a Presidential Directive (HSPD-5 2003). PS-Prep chooses to provide compatibility with the International Organization for Standardization (ISO) (ASIS Appendix B). Ps-Prep also uses common terminology aligned with ISO rather than with the ICS. The ICS was first developed in the 1970's to, in-part bring common terminology to emergency responders in multi-agency multi-jurisdictional incidents (FIREScope, 1988).

Failure of PS-Prep to provide NIMS and ICS compatibility severely inhibits the entire private sector business community from achieving the shared awareness that the program was designed to deliver.

Business Emergency Operations Center (BEOC)

The PS-Prep document ASIS SPC. 1-2009 (2009, 34), states that the organization should consider the establishment of virtual command centers for distributed access to information as well as to reach dispersed or remote stakeholders. This single element of PS-Prep provides the most valuable information for small businesses. It provides the link to a BEOC where small businesses can achieve the shared awareness that larger private sector organizations already have.

The BEOC operates a versatile communication hub which links the public and private sectors in omni-directional information sharing (New Jersey Business Force). BEOC development is consistent with the basic guidance provided by President Bush's October 2007 National Strategy for Information Sharing as well as the January 2008 National Response Framework (FEMA NRF) (U.S. Whitehouse). The BEOC has served as the EOC during several national and local drills and simulations as well as during actual events.

The aftermath of September 11 has prompted many organizations to develop Virtual Emergency Operation Centers (VEOC). An EOC is virtual when participants can share information, make decisions and deploy resources without being physically present in the EOC (S. C. Davis). In Turoff's DERMIS paper the authors write that crises involve the necessity for many hundreds of individuals from different organizations to be able to freely exchange information, delegate authority, and conduct oversight, without the side effect of information overload (Turoff). Hundreds or thousands of small businesses attempting to contact any emergency response agency, as directed in PS-Prep, will likely prevent those agencies from effectively communicating with responders and victims alike. Small business owners who must gather all their information from news media will likely become overloaded with information that will not be useful to their response efforts.

The VSBEOC will operate with a secure portal designed around the capabilities of the current BEOC secure portal. New Jersey Institute of Technology has the ability to build a distinct secure portal for small businesses. This portal will also have the capability to share information across portals with the NJ Business Force. This will allow the VSBEOC to begin operation with the capability of delivering alerts and notifications to all member small businesses. As the number of small business members increase so will the value of the information and intelligence that the VSBEOC will be able to share internally and across portals.

As previously written the PS-Prep program fails small businesses in several areas. The VSBEOC has the technology to deliver some of the services that will assist small business owners to a more robust business continuity plan. There is a real effort between public and private sector organizations to share information. The BEOC is currently working with several public sector EOC's and the state EOC. The effort is succeeding at least in part because the public centers are sharing information with a single entity who in turn is the conduit for sharing

information with both its members and the public centers. Public EOC's do not have the staffing to provide similar services to every organization that desires to share information.

PS-Prep also calls for a primary and secondary Crisis Management Center (CMC). The VSBEOC will unify the small business community and provide a virtual CMC. Small business will be able to access their business continuity plans, collaborate with each other to provide the most cost effective response, and maintain up to date information about their communities response efforts. The VSBEOC will provide the small business community with the necessary tools better prepare them to respond to events causing business outages.

Testing the business continuity plan is a difficult process for the small business owner to accomplish. The VSBEOC will be able to coordinate plan testing so that lessons learned from similar organizations can be provided across the portal so many small businesses can benefit from a single test. The VSBEOC can also leverage lessons learned from NJIT's simulation test bed and simulation lab. This information can be presented within the secure portal as a conference, discussion, or as shared information.

Compliance, monitoring and measuring are also areas where the PS-Prep details several levels of audits which small business owners can not complete. The VSBEOC will assist small business owners with completion of business continuity (BC) plans which the owners feel are compatible with their capabilities. Documents and records will be stored and accessed through the secure VSBEOC portal. Records which need updating can automatically generate alerts to the owners to notify them. Document storage can also be a part of the secure portal so that owners can safeguard important documents.

Conclusion:

FEMA attempted to assist the small business community by implementing a certification program compatible with ISO standards. PS-Prep contains three documents, ASIS SPC.1-2009, BS-25999, and the Standard on Disaster/Emergency and Business Continuity by the National Fire Protection Agency (ASIS, 2009) (DHS, 2010) (NFPA, 2007) (Avalution Consulting and BSI Management Systems America, 2008). Each document seeks to certify the participating organization with initial fees and additional fees corresponding to continuing requirements. Many large corporations refuse to become ISO certified because the cost of certification is not within their operating budget. Small business owners need assistance in developing business continuity plans but can not afford to pay for services that fail to provide the framework and resources that are needed.

PS-Prep also failed to unify the private sector business community with the NIMS and ICS standards. By providing compatibility with ISO instead of ICS, PS-Prep placed the private sector at a disadvantage in establishing a collaborative environment with the public sector. This disadvantage can only be universally overcome through FEMA's redistribution of this program with ICS compatibility. THE VSBEOC can overcome this disadvantage locally by providing a training course on the NC4 secure portal. The training will be shared across portals with all member organizations.

The VSBEOC will set the standard for creating the collaborative environment needed to establish shared awareness throughout the small business community. Small businesses will no longer have to rely solely their own limited resources. Resources can be shared across the community creating a more efficient and cost effective approach to incident response and BC. Secure document storage and retrieval including business continuity plans will be available to all members. The VSBEOC was developed with technology leveraged from the existing BEOC but the requirements of the small business community will be such that the VSBEOC will become more robust than the BEOC.

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Virtual Small Business Emergency Operations Center (VSBEOC): Shared Awareness and Decision Making for Small Business

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Introduction

- **Business Continuity**
- **DHS – PS-Prep**
- **NJIT – BEOC**
- **Virtual Small Business Emergency Operation Center - VSBEOC**

Business Continuity

- **BC-Private Sector Emergency Preparedness**
- **Size Matters – Public & Private**
- **2007 – FEMA Establishes Private Sector Division**
- **2010 – BC Certification Established**

DHS – PS-Prep

- **Voluntary Private Sector Preparedness Accreditation and Certification Program**
- **ASIS SPC.1-2009**
 - **Establish Relationship with Public Sector**
 - **Establish Primary Crisis Management Center**
 - **Test the BC Plan**
 - **Compliance, Audits, and Certification Costs**

NJIT - BEOC

- **Business Emergency Operation Center**
 - NC4 Alerts
 - Simulation, Modeling
 - Information Sharing and Collaboration



NJIT

VSBEOC

- **Secure NC4 Portal – Collaboration**
- **Shared Awareness**
- **Shared Services**
- **Business Continuity Planning and Testing**
- **Simulation and Modeling**
- **Continued Improvement Through Research**

Conclusion

- **PS-Prep is Not Sufficient for Small Business.**
- **VSBEOC Builds on a Successful BEOC**
- **VSBEOC provides a collaborative environment, shared awareness, and increased decision support.**
- **Linked to BEOC, NJ Business Force and NJIT.**

Future Research

- **Development of Essential Tools**
- **Pilot – Newark Downtown Development Association**
- **Nodal Expansion Plan**
- **Continued Evaluation and Improvement**