

# Report on the 7th Annual Regional Critical Infrastructure Interdependencies Workshop

*Long-term Recovery and Economic Restoration*



January 27  
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Microsoft Conference Center

# 2012

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## EXECUTIVE SUMMARY

The seventh annual Washington State Homeland Security Region 6 critical infrastructure interdependencies workshop was conducted on January 27, 2012 at the Microsoft Conference Center in Redmond, Washington. This was the first workshop focusing on economic recovery. There were one-hundred fourteen participants in the workshop including representatives from education, local government, state government, federal government, large business, medium business and small business. The participants rated the workshop with eighty-five percent rating it very good to excellent. An additional thirty-eight individuals participated in a survey following the workshop to add additional validity to our findings.

Over the past several months many levels of government have started to focus on recovery plans to restore critical infrastructure and businesses after a major catastrophic event. Several counties and cities in the region have expressed interest in examining the needs of the private sector in long-term recovery plans. Currently no business resumption strategy or economic restoration plans are in place. The Region 6 CIP working group recognized the need to focus on economic recovery, the priorities of the private sector and began the process to analyze specific interdependencies to consider in this process.

The Washington State economy is dependent on three primary drivers, sales tax, business and occupation tax and property tax. Two of the three tax bases and one-third of property tax depend on business. The capacity for the region to recover economically is completely dependent on businesses staying open following a catastrophic event.

Our scenario for the workshop was a major earthquake, highlighted by Bill Steele of the University of Washington Seismograph Lab and Pacific Northwest Seismic Network. His analysis of recent earthquakes and the types that could devastate the Puget Sound region set the stage for the workshop activities.

The objectives of the workshop were to: 1) determine what might keep a business from reopening following a major earthquake; 2) explore what might be done to reduce the impact and speed business resumption ahead of time; and 3) provide guidance to recovery planners about what should be included in recovery plans focused on economic recovery.

The key findings from the days' activities centered on three primary areas of focus: 1) information; 2) employees; and 3) infrastructure priorities. First, information must be readily available, shared and found at a single source. Second, employees are the primary business resumption challenge. For businesses to be prepared, employees and their families must be prepared. Third, infrastructure such as roads, power, water, communications, transportation systems, financial capacity, fuel and the myriad of interdependent systems need to be prioritized to speed business resumption.

The top three high level recommendations supporting the key findings were: 1) establish a single source of business information like a business emergency operations and recovery center; 2) create incentives for business to prepare employees and their families so they can resume work, buy goods and sustain the economy; 3) include infrastructure priorities in recovery plans and include the private sector in policy decisions following a major event.

In conclusion, recovery planning in the three counties represented at the workshop (King, Pierce and Snohomish) are well underway. Further development of economic recovery portions of these plans are necessary. It is well understood by the emergency management community that they are not the experts in economic recovery and engagement of the private sector in planning as well as the involvement in decisions following a major event is critical. There is work to be done but we've taken the first step toward reducing the impact on our economy and allowing business to recover when the big earthquake occurs. It takes dialogue, planning and action. Our region has taken the lead, it is now time to act.

## SECTION 1: WORKSHOP DESIGN

**1. Exercise Purpose and Design:** The Washington State Region 6 Critical Infrastructure Interdependencies Workshop was conducted to explore business recovery and business resumption for the Puget Sound region following a major earthquake. The workshop explored the issues of infrastructure, government, physical plant, employees/customers and suppliers. It was designed in three phased breakouts exploring: A) What would keep business from reopening; B) What could be done ahead of time to reduce the impact and speed business resumption; and C) What should be included in government recovery plans to facilitate business resumption? The workshop was funded through 2009 State Homeland Security Grant Program. Planning for the workshop began in October 2011 through meetings and e-mail with the design team, King County, Pierce County, Snohomish County leadership and the Pacific Northwest Economic Region, Center for Regional Disaster Resilience.

The Region 6 CIP Working Group hosted a planning meeting at Puget Sound Energy in October 2011 with 30 CI/KR representatives from across the region. The consensus of the group was to focus the upcoming workshop on long-term recovery after a major earthquake, with a special emphasis on private sector and business. The participants felt this event would complement the activities underway related to other events in the coming months related to earthquake preparedness. A follow on meeting with King, Pierce, Snohomish Counties and City of Seattle further focused the workshop on business resumption. Very little has been done on developing a regional business resumption strategy for the region or state. The counties and city welcomed input from the private sector on this topic and expressed interest in working with key business leaders to develop and refine recovery plans.

**2. Workshop Objectives:** To identify the business recovery and business resumption issues and explore solutions. The overarching workshop objectives were:

- A. Assess regional economic recovery planning efforts.
- B. Assess the regional business recovery and business resumption priorities.
- C. Assess the regional business recovery and business resumption steps that could be accomplished before a major earthquake to reduce the impact on business and speed business recovery.

**3. Scenario Summary:** The regional critical infrastructure interdependencies workshop involved a major earthquake impacting the central Puget Sound region impacting the built environment and infrastructure including roads, bridges, water, sewer, power, communications and facilities.

**4. Planned Simulation:** No simulation was used for this workshop. Two assumptions were made: 1) The earthquake impacted the participants; 2) The participants and their family were safe and secure.

## SECTION 2: WORKSHOP SUMMARY

**1. Overview of presentations:** Bill Steele, University of Washington Seismology Lab Coordinator, Pacific Northwest Seismograph Network framed the scenario of a major earthquake in the Puget Sound region. His presentation centered on the types of earthquakes we might expect and the impact on the economy. He used lessons learned and expectations based on similar earthquakes in Chile in February 2010 and the earthquake and tsunami in Tohoku Japan in March 2011. He also discussed new technologies being developed, including a new earthquake notification service, to give some level of notice prior to ground shaking. This technology could assist in reducing injuries simply by giving seconds to a few minute notice to brace for shaking. His presentation was the framework for the discussion to follow.

**2. Summary of discussion points:**

- A. The focus of the workshop was to explore the aspects of economic recovery from a catastrophic earthquake in the Puget Sound region. Business resumption and economic recovery are interlinked, one will not occur without the other. Participants were provided definitions of recovery (Appendix D). Further discussion centered on the National Disaster Recovery Framework (NDRF). Participants were provided a graphic representation of the NDRF with the business and economic recovery facets highlighted.
- B. Beginning the discussion was a moderated question and answer session with the three primary counties regarding the state of recovery planning with a focus on economic and business recovery. The participants were: Hillman Mitchell, Director, King County Emergency Management; Jody Woodcock, Deputy Director, Pierce County Emergency Management; and, Jason Bierman, Recovery Program Manager, Snohomish County Emergency Management. The three subject matter experts responded to the following questions:

- 1) You have all thought about the planned for catastrophic events, what planning has been done regarding economic recovery?

Panelists agreed that economic recovery was not easy and not a natural fit for emergency management. Long-term private sector engagement is difficult but essential. Pierce County has partnered with Economic Development to focus on how to set up business coordinators. They have met with venture capitalists to learn how to infuse capital and rebuild the

economy. In Snohomish County, they are also partnering with Finance and Economic Development, they are just getting started on developing a long-term recovery plan for the county and will include the economy as part of the final plan. In King County, they have developed a recovery framework modeled after the FEMA National Disaster Recovery Framework. Part of the King County framework includes developing a recovery council made up of policy makers to assist in facilitating the needs of the private sector. Advising the recovery council will be a regional recovery advisory group made up of critical service providers and private sector stakeholders. All three panelists agreed that one of the keys to success is getting government out of the way to make business recovery as friction free as possible.

- 2) FEMA and the Small Business Administration statistics of past disasters estimate 40 percent of businesses never reopen after a catastrophic event and 25 percent that do open fail within the first year, sobering numbers to think about. Do you think there are opportunities to reduce those numbers?

All three panelists mentioned mitigation and continuity of operations plans as a top priority for businesses. They felt it was essential for business to have COOP plans in place to ensure a quick recovery. Jody Woodcock added that aside from COOP plans, personal preparedness was number one. She mentioned frustration from hosting workshops for business that no one attends. She recommended that emergency management stop pretending they know what is best for business and start listening to the needs of the private sector. She said once she started to do this herself she learned what small and medium sized businesses are dealing with on a daily basis. They do not have time to attend workshops. Many small businesses are financed by a single credit card. She felt we could look to larger companies that might be willing to mentor some smaller businesses to help them develop COOP plans. She mentioned the whole community approach that FEMA has recently launched. If communities could work together to fold their neighbors into the entire neighborhood to ensure they are taken care of, we will be better off in the long run. This will take the burden off of government and allow government to focus on the most vulnerable.

### 3. What are your expectations for today?

Panelists all felt a need to better share information with each other and between the private sector and government. Jason mentioned that he felt the workshop will highlight to need to continue to focus on interdependencies and develop relationships and trust. Hillman hoped to better understand what information the private sector needs to help them make better decisions. Jody also echoed this and added that she would like to identify needs and opportunities to invest in these prior to a disaster.

C. The next session was a breakout to answer the question, what might keep business from reopening following the big earthquake? The task was to determine the key issues and the problem statements associated, then to prioritize the key issues facing business. The breakout groups were kept within sectors (education, local government, state and federal government, large business and small business). The purpose of the breakout groups were to highlight differences between what government thinks and what private industry thinks are the biggest issues/problems keeping business from reopening. The key findings from this breakout were:

- 1) **Issue:** Information and situational awareness. **Problems:** Where do I get it? How do I provide it? How do I validate it? How to communicate needs and haves to share across business? **Link:** Employees, Infrastructure, Finance. **Groups that included this issue:** Business, education, government.
- 2) **Issue:** Employees/Customers. **Problems:** Are basic needs met (food, shelter, school, daycare)? How will they get the information to decide to work or leave town? Can they get to work (roads, transportation)? How can I reach employees? How do customers know we're open? Do business and employees have personal preparedness plans? **Link:** Information, Infrastructure. **Groups that included this issue:** Business, government.
- 3) **Issue:** Infrastructure. **Problems:** Timely and accurate information on restoration (roads, power, water, communication). How are priorities set? How are fuel priorities set? **Link:** Information, Employees. **Groups that included this issue:** Business, education, government.

- 4) **Issue:** Finance. **Problems:** Access to cash. Inability to use credit cards or process point of sale transactions. Business capital for repair. Ability to get bridge loans to operate. **Link:** Information, Infrastructure. **Groups that included this issue:** Business, government.
  - 5) **Issue:** Government. **Problems:** How to get building inspections? What is the priority for inspections? Who is available to do inspections? How to get permits or variances? How to communicate? How are policies determined? How can processes be expedited? What regulations could be relaxed to speed recovery? **Link:** Information. **Groups that included this issue:** Business, education, government.
  - 6) **Issue:** Facilities. **Problems:** Can we use them? Can we relocate temporarily? How do we notify employees? How do we know about our suppliers? What are the security access requirements? Who determines if a facility is operational? **Link:** Information, Employees, Infrastructure. **Groups that included this issue:** Business, government.
  - 7) **Issue:** Supply Chain. **Problems:** How to find out if suppliers are in business? How to restock inventory? How can suppliers reach us? Do suppliers have recovery plans? What are the interdependencies impacting supply chains? **Link:** Information, Infrastructure, Facilities. **Groups that included this issue:** Business, government.
- D. The next session was a breakout to answer the question, what might be done ahead of time to speed business resumption? The task was to use the priorities from the first breakout to attempt to reduce the impact of the big earthquake and facilitate business recovery. The breakout groups were kept within sectors (education, local government, state and federal government, large business and small business). The purpose of the breakout groups were to highlight differences between what government thinks and what private industry thinks are the potential solutions to speed business resumption. The key findings from this breakout were:
- 1) **Issue:** Planning. **Possible Solutions:** Business continuity planning. Enhance telework options and labor agreements. Better government inclusion of private sector in planning. Possible mentoring on COOP development by larger organizations. Large companies could also work with suppliers to ensure they have COOP plans developed. **Gap**

**between business and government:** Larger businesses have this capability, smaller businesses do not and lack the capacity to do COOP planning. **Link:** Information/communication, employees, government. **Groups that included this issue:** Government.

- 2) **Issue:** Employees. **Possible Solutions:** Personal Preparedness training in schools and daycare centers. Employee preparedness incentives. Stronger tie to employee and family preparedness information which will speed business resumption. Cross training employees to fill in. An employee center to find employees that might be out of work temporarily. Have a transportation coordination center/website. Just-in-time ride share. CERT training for employees. **Gap between business and government:** Both groups recognize the importance of employee preparedness to business preparedness. **Link:** Information/communication, government, infrastructure. **Groups that included this issue:** Government, business.
- 3) **Issue:** Government. **Possible Solutions:** Reduce barriers and processes for permits to allow business to get operating. Train business employees on building inspection to expedite reopening. Develop MOUs with neighboring jurisdictions to include British Columbia to assist with building inspections. Identify cross licensed engineers in British Columbia and Washington to provide inspection services. Assist with business continuity planning. Assist with employee preparedness. Utilize map-your-neighborhood for businesses to share resources. One stop shop for permitting, licensing, access to contract services and streamline regulatory process. Certify contractors to assist with building repairs (avoid price gouging). Develop centralized certified contractor database. **Gap between business and government:** There were clear differences between business expectations and government capability to deliver. Business concern was that government plans would not work or would be ignored in a crisis. **Link:** Information/communication, employees, infrastructure. **Groups that included this issue:** Government, business, education.
- 4) **Issue:** Information/communication. **Possible Solutions:** Establish a business emergency operations center and recovery center. Single web source for infrastructure priorities. Pre-planned and exercised single

communication sources. Use of social media, crowd sourcing, tweeting and harnessing for information sharing. Develop scenario based exercises to talk through restoration priorities and communication strategy. Create a restoration and commerce resumption working group prior to event and begin to meet and develop relationships early on. **Gap between business and government:** A clear gap exists between what business expects and past reality of lack of information from government or conflicting guidance. **Link:** Government, employees. **Groups that included this issue:** Business, government.

5) **Issue:** Infrastructure. **Possible Solutions:** Have pre-planned priorities. Utilize snow routes for transportation. Pre-plan for use of National Guard equipment to help restore infrastructure. Pre-plan security access requirements and authorization. Prioritize fuel distribution for business. Prioritize power and water restoration. Communicate recovery plans with infrastructure partners, (example: energy and telecom share plans with other dependent infrastructures.) **Gap between business and government:** The expectation of business is one place to get information to speed business resumption which is dependent upon infrastructure restoration priorities being communicated. **Link:** Information/communication, government, employees. **Groups that included this issue:** Government, business.

6) **Issue:** Finance. **Possible Solutions:** Modify banking rules to easily expand credit line. Create bridge loan program to keep businesses from relocating. Create a regional disaster investment fund to aid in recovery. Have mobile ATMs that can be set up if banking system is overwhelmed. **Gap between business and government:** Recognition that money is key to business operation but the gap is who can assist in the short term. **Link:** Information/communication, government. **Groups that included this issue:** Business, government, education.

E. The next session was a breakout to answer the question, what would you like include in government recovery plans? The task was to consider the priorities from the first breakout and possible solutions from the second breakout to influence economic recovery planning. The breakout groups were given the ability to change groups for this breakout. The key findings from this breakout were:

- 1) Employee and family preparedness is business preparedness. Develop stronger ties to preparedness information for employees and their families which will speed business resumption.
  - 2) Creation of a single source of information for business to keep aware of the situation and allow two-way communication (business emergency operations center and recovery center concept).
  - 3) Development of a long-term recovery communications strategy.
  - 4) Include infrastructure restoration priorities for roads, power, water/sewer, fuel, communications and transportation systems.
  - 5) Further workshops and exercises focused on interdependencies around long-term recovery scenarios.
  - 6) Create a long-term recovery advisory council made up of public and private stakeholders prior to an event and begin to talk through scenarios and priorities of the region.
  - 7) Include private sector in the recovery policy decision making process.
  - 8) Include the legislative authority to reduce regulations during business restoration/resumption.
  - 9) Provide local business incentives to contract for recovery services by removing or expediting the bidding process for local business.
  - 10) Create employee availability, service needed and service available hubs to facilitate business resumption and share resources.
  - 11) Begin to develop a long-term business resumption strategy for the region and state.
- F. For the next session, participants were able to give any key points they learned during the meeting. One participant from the education sector mentioned a site called Ecitygov.net, this site is a one-stop-shop for several cities around the region to get info on building permits and other information. It was pointed out several times that there is a need for a long-term recovery center and this might be a beginning place to start. One representative mentioned the need to ensure state, county and city department of transportation maps are integrated. It was mentioned that several large companies use a system called INRIX for realtime traffic information. A member of the banking sector recommended exploring the

development of micro-loan programs as a service to small businesses to immediately help in recovery and have government possibly serve as guarantor for these loans. The website [www.restoreyoureconomy.org](http://www.restoreyoureconomy.org) was also highlighted as a best practice to assist in developing economic recovery strategies. This site was developed by the US Economic Development Administration (EDA) and has excellent information on how to pull together a plan.

- G. The final panel again involved the three primary counties and asked for key issues heard during the day. The participants were: Hillman Mitchell, Director, King County Emergency Management; Jody Woodcock, Deputy Director, Pierce County Emergency Management; and, Jason Biermann, Recovery Program Manager, Snohomish County Emergency Management

Jody Woodcock started the panel by stating that the key point she heard was the importance of relationships and engagements. She felt that we need to have the right people at the table to develop a comprehensive recovery plan and it can't be left to government to do this alone. She also stated the importance of speaking to business in a way that is meaningful. Focusing the need for COOP and mitigation plans into dollars and cents will get more attention from business.

Jason Biermann stated that the workshop helped reiterate that emergency managers are not subject matter experts on this topic and we need more input from those that deal with the expertise. Hillman Mitchell stated that the workshop helped reiterate the need to leverage community strengths and focus these strengths during an emergency. He felt that discussions like this help us be more creative and also better understand the needs of the community.

- H. A survey was developed to allow participants and those who could not attend the workshop to participate in the collection process. The results of the survey was used to validate the summary of discussion points.

**3. Summary of results and recommendations:** The following information summarizes the workshop results and recommendations.

- A. Results:** The workshop met its goal to improve economic resilience within the Puget Sound region and beyond by involving participants from local, state, federal government agencies and provincial and federal Canadian government, as well as businesses from throughout the Puget Sound area. The dialogue and process allowed for wide ranging viewpoints to be explored and built upon through group participation. This report will be used by local government

planners to enhance the economic recovery plans to help business resumption following a catastrophic event.

**B. Recommendations:** There are three primary recommendations as a result of meeting the workshop purpose to provide input to planners to improve critical infrastructure / business resumption and economic recovery following a catastrophic regional earthquake.

- 1) Information sharing is the number one recommendation. There must be a seamless, single source of information for business to facilitate resumption. There must be a two-way communication capability between business and government. The capability to locate employees and share business capability should be included in a single information hub. A capability that must be explored is the business emergency operations and recovery center concept to be used as an integrator of information and a conduit for both government and business information sharing.
- 2) Infrastructure restoration priorities must be published and known by the business community. Infrastructure restoration information must be known and communicated (see 1 above) to allow businesses to open quicker or make decisions on relocating. Recovery plans must include restoration priorities as part of the economic recovery process with private business participation in setting policy and priorities.
- 3) Reduction of government "red tape" following a disaster to facilitate business resumption is necessary. There must be pre-determined legislative authority to waive certain rules, to allow single sources for licensing and permitting, and a capacity multiplier for building inspections (see 1 above).

**C.** The key recommendation and conclusion to the days' work comes down to the ABC of recovery - Always Be Communicating. Information is the key to business resumption and economic recovery. Without it we will be doomed to repeat other catastrophic events. With it we can mitigate historical problems, speed business resumption and restore the economy which drives government services.

### SECTION 3: CONCLUSION

This was the seventh annual critical infrastructure interdependencies workshop and the first to discuss economic recovery. The topic is complex and there are no easy answers, but the collective wisdom of our participants provided insight into what would keep a business from reopening following a catastrophic earthquake in the Puget Sound region. Over half of our participants were from the private sector which added great value to the discussion and clear focus to the real problems facing business resumption. Our government and education participants added value to the process by closely looking at the planning process and how they might facilitate business resumption. The result of the workshop was a greater understanding of cascading interdependencies and impediments to the economic recovery process. By exposing the areas that differ and highlighting the common ground we have begun the process of understanding economic recovery is dependent on businesses being open, people working and buying and retaining a sense of normalcy.

## **APPENDIX A: ACRONYMS**

CERT - Community Emergency Response Team

I/KR - Critical Infrastructure/Key Resources

CIP - Critical Infrastructure Protection

COOP - Continuity of Operations Plan

EDA - US Economic Development Administration

EOC - Emergency Operations Center

FEMA - Federal Emergency Management Agency

NDRF - National Disaster Recovery Framework

POC - Point of Contact

PNWER - Pacific Northwest Economic Region

WA - Washington State