SABER:
Get Business Status During Disasters Through SABER, the Single Automated Business Exchange for Reporting

November 15, 2018 1-2 pm ET
Agenda

• Introduction
• Overview of the NISC
• SABER: Get Business Status During Disasters Through SABER, the Single Automated Business Exchange for Reporting
• Q&A
• Quiz for those seeking Continuing Education Units (CEUs)
Today’s Speakers

- Sean McSpaden, NISC Executive Director
- James Morentz, SABER Executive Director
Continuing Education Units (CEUs)

- CEUs will be awarded to participants that watch the webinar and complete the quiz following the webinar
- 0.1 CEUs for this hour-long event
Learning Objectives

1. Understand the importance of businesses to a community’s recovery from disaster.

2. Identify the multiple ways SABER can collect and distribute data.

3. Understand how data from SABER can help emergency management and other agencies prioritize response activities.

If you have questions during the webinar, please submit using the question feature in GoToWebinar.
NISC Mission-Focused Job Aids Webinar Series

• In-depth discussion of tools, techniques, and standard operating procedures used for information sharing

• Webinar content applicable to multiple fields, including:
  • Homeland security,
  • Emergency management,
  • Public safety,
  • First responder, and
  • Healthcare preparedness.
NISC Mission-Focused Job Aids Webinar Series

• **December 6:** A Culture of Preparedness: Federal, State, and Local Training Resources (co-hosted by the NISC, DHS Emergency Services Sector, and DC Homeland Security Emergency Management Agency)

• **January 17:** Red Cross: Using Technology for Situational Awareness and Decision Support with RC View (co-hosted by the NISC and the American Red Cross)

• **February 21:** Transparency in Procurement: How Aggregating Existing Contracts and References Will Lower Cost, Risk, and Time to buy New Technology (co-hosted by the NISC and Marketplace.city)

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National Information Sharing Consortium

The NISC is a non-profit organization devoted to improving information sharing at all levels of government and for all homeland security, emergency management, first responder, healthcare, and public safety stakeholders.
NISC Members Span Multiple Domains & Disciplines

Public Sector – Private Sector – Non-profits

- Communications
- Critical Infrastructure
- Emergency Management
- EMS
- Fire
- GIS
- Information Technology
- Law Enforcement
- Military
- Private Industry
- Public Health
- Homeland Security
Member Benefits & Application

- Guidance and technical assistance
- Knowledge exchange and networking opportunities
- Access to the NISC Member Portal


Or click ‘Join’ at the top of any webpage on [www.nisconsortium.org](http://www.nisconsortium.org)
Get Business Status During Disasters
Easy to Provide ... Easy to Use

November 15, 2018
James W. Morentz, Ph.D.
SABER Powered By XchangeCore
Executive Director
Topics

• The Challenge and SABER Purpose
  – Business
  – Government
• What Others Think
• How SABER Works
• SABER Examples of Visualization and Analysis
• SABER in the Real World
• SABER Operational Use Cases
The Challenge

• 40% of businesses fail after a disaster*; the longer a business is out of business, the greater the chance of failure

• After life-saving, the priority of a community should be to get business back to business
  – Business means jobs
  – Business means helping people in an event charge phones, use microwaves, fuel to relocate, places to stay
  – Business means food/health commodities to get people out of shelters
  – Business means available construction supplies to restore/rebuild
  – Business means the community is returning to normal

• How to get businesses back in business faster?

* FEMA, 2014
The Solution: Influence Priorities

• SABER was created by the private sector to provide a single location to report business disruption and restoration status ...
• ... to be shared with authorized government agencies and other approved organizations.
• SABER was founded by an Organizing Group that consists of Walgreens, Wal-Mart, Target, Macy’s, Boyd Gaming, Costco, Lowes, and Sears Holdings
• Operating since 2014 as a nonprofit for the benefit of critical infrastructure and business to provide status and needs to government agencies, from local to state to FEMA

• **Purpose:** Influence government recovery priorities and enable business-to-business brokering by providing accurate and timely business status information to get businesses back in business faster
What Others Think About SABER
2017 FEMA Technology Innovation Award

CONGRATULATIONS TO THE 2017 ICP AWARD WINNERS
SABER receives ...

Partners in Preparedness Award for Public Awareness

International Association of Emergency Managers
SUCCESS: CLEARINGHOUSE INFORMATION SHARING EFFORT RECOGNIZED BY U.S. DEPT. OF HOMELAND SECURITY AS A GEOCONOPS BEST PRACTICE!

Sept. 22, 2015: “...a geospatial method, technique, capability or resource that provides superior support to the mission; and is used by the geospatial community as a benchmark for success”
How SABER Works
Three Ways In ...

Business Operations Status

Option 1: Fully Automated Connection to Internal Business Management System When Available from Company

Outage Data Source

SABER is Status Data

XchangeCore transforms business status into National Information Exchange Model-compliant standard data formats and notifies connected applications of updated status based on permissions.
Three Ways In ...

Business Operations Status

Option 2: Spreadsheet of status from management system or manually, depending on company capability

Status spreadsheet uploaded to SABERspace.org

SABER is Status Data
XchangeCore transforms business status into National Information Exchange Model-compliant standard data formats and notifies connected applications of updated status based on permissions
Three Ways In ...

Business Operations Status

Option 3: Commercial SpotOnResponse™ mobile app for Ops Center and field status reporting

SABER is Status Data

XchangeCore transforms business status into National Information Exchange Model-compliant standard data formats and notifies connected applications of updated status based on permissions.
Three Ways In ... Many Applications View

**Business Operations Status**

**Option 1:** Fully Automated Connection to Internal Business Management System When Available from Company

Outage Data Source

**Option 2:** Spreadsheet of status from management system or manually, depending on company capability

Status spreadsheet uploaded to SABERspace.org

**Option 3:** Commercial SpotOnResponse™ for Ops Center or field status reporting

**SABER is Status Data**

XchangeCore transforms business status into National Information Exchange Model-compliant standard data formats and notifies connected applications of updated status based on permissions

**Organizations Impacted/Supported**

- Government, Corporate, Public Web Portals
- Incident Management Applications (WebEOC, others)
- GeoCollaborate and ArcGIS Common Operating Pictures
- Police, Fire, Utility, Mobile Apps for Field Verification
- Free Copy of Google Earth®
- And Many More…

www.SABERspace.org

www.XchangeCore.org
Technical Architecture

Automated Feed Ingest
- GeoRSS Input Connector

Spreadsheet File Upload
- CSV Input Connector

Web Service
- SOAP Connector (Two-Way)

Feed Ingest or File Upload
- GeoJSON Input Connector

SABER

Status Transformed to NIEM-conformant Incident

REST GeoJSON
- On-Demand Query

KML Feed
- On-Demand Query

SOAP Connector (Two-Way)
- Web Service Providing NIEM-Conformant Output

GeoRSS Feed
- On-Demand Query

XML Feed
- On-Demand Query

JAVA and C# for Dot Net

JAVA Web Services

Direct Input to GIS and Incident Management Software

JAVA and C# for Dot Net

JAVA Web Services

Direct Input to GIS and Incident Management Software
Inside XchangeCore: NIEM Data Package
The Process Is Irrelevant: SABER Is DATA You Can Use

REST GeoJSON  | ArcGIS Feature Service
KML Feed      | Google Earth
SOAP Connector (Two-Way) | WebEOC, etc.
GeoRSS Feed   | Excel, ArcGIS Online
XML Feed      | Website (with Parsing Software)
SABER Examples
Visualization and Analysis
Analysis Through the FEMA GeoPortal

SABER Private Sector Outages (09-12-2017)
FEMA-4337-DR-FL

Jacksonville

Tampa Bay Area

Orlando Area

South Florida

Saber Category

B BIG BOX
P PHARMA
H HOTEL
F FUEL
R RESTAURANT
D DEPT STORE

Note: This data contains voluntarily reported private sector disruption and may not include all outages.

www.SABERSpace.org
www.XchangeCore.org
Georgia Emergency Management Agency/Home Land Security

SABER

SABER is the single location for private sector organizations to deposit their operations disruption and restoration information to be shared with authorized government agencies.

Category of Business

Business Disruption Category

- Walmart-Closed
- Target-Closed
- Closed-BIGBOX
- Closed-FOOD
- Closed-PHARMA
- Closed-HOTEL
- Closed-FUEL

Total Business Disruptions

485
Visualization with ArcGIS Online
WebEOC
ESRI Publishes Feature Service

SABER added to ESRI
ArcGIS 2018
Hurricane Season Maps and Layers

Many thanks to Kevin Armstrong, GIS Solutions Engineer, Esri Public Safety in Charlotte, NC
NEMA-IAEM Public-Private Portal

Sectors

Relationships

Raw Data

Time Series

Frequency

Geospatial

Comparison Visualization
Arizona DEMA Mass Care Dashboard

National Mass Care Exercise 2018 Tab Map Series Story Map

Filter
City Filter
Store Type Filter

U.S SABER Business Disruption Public View
- Walgreens: FOOD
- undefined: undefined: undefined
- PHOENIX: CVS: PHARMA
- CHINO VALLEY: Pizza Hut: FOOD
- Walgreens: FOOD
- Rincon: Comoco Phillips: FUEL
- Mantlona: CVS: PHARMA
- XING: Denver: FOOD
- undefined: undefined: undefined
- Yuma: Pizza Hut: FOOD
- Glendale: Pizza Hut: FOOD
- PHOENIX: CVS: PHARMA
- Pharris Taco Bell: FOOD
- undefined: undefined: undefined

SABER Classifications
- Closed-FOOD
- Closed-FUEL
- Walmart-Closed
- Target-Closed
- Lowes-Closed
- Macy's-Closed
- Costco-Closed
- Sporting Goods-Closed
- Incident
- Other

Business Disruption
- Closed-FOOD: 46
- Closed-FUEL: 4
- Closed-HOTEL: 3
- Closed-PHARMA: 11
- Walmart-Closed: 34

Use this filter to define what town or store you are interested in seeing if there is a business disruption. The filter has cascading actions with the map, serial chart, and list.
Free Copy of Google Earth
Live Earth Merges Warnings, Radar and SABER Status
Florida Common Operating Picture
South Carolina Palmetto Vision
CloudEOC
Simple Browser Output from SABER
Daily Time Series Analysis of Closures

Reported to SABER, the Single Automated Business Exchange for Reporting

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*No credit card transactions by satellite

SABER time series data is an indicator of site closures and progress toward restoration of service. Note that some reopened sites may be open limited hours. The data is compiled directly from companies and from Hughes satellite services for credit card processing which serves as a proxy for closed business operations. Note that it is possible that sites may be operating without satellite services and that average daily outage (which is interpreted as business closure) is about 3%. These sites are not a random representation of business conditions and should not be extrapolated.

Business Reopening Trends Reported to SABER

For more information, see SABERspace.org or contact James W. Keenan, Ph.D., Executive Director 301-467-4182.
National Business Emergency Operations Center
October 25, 2018

Business Operating Status Assessment
Retail & Pharmacy Operating Status
October 10, 1800 EDT

SABER Status Map
(closed retail locations with storm track and wind field overlay)
Oct 10, 1800 EDT

Businesses Reporting Closed Status

Retailers & Pharmacies
Closed: 5 (+5)
Oct 10, 2018, 0800 EDT
Sources: Walmart RSS & RxOpen

Retailers & Pharmacies
Closed: 72 (+67)
Oct 10, 2018, 1800 EDT
Sources: Walmart RSS & RxOpen
Retail & Pharmacy Operating Status
October 11, 1800 EDT

SABER Status Map
(closed retail locations with storm track and wind field overlay)
Oct 11, 1800 EDT

Retail Locations Reporting Closures
SABER in the Real World

Hurricane Maria
Hurricane Maria in Puerto Rico Looks Bad Through Walmart “Bellwether”
Sears, Walmart, CVS, Hotels in Puerto Rico and Virgin Islands
Growing Indicators of Loss in Google Earth, ArcGIS Online and SpotOnResponse
SABER in the Real World

Hurricane Michael
SABER Community Gets Ready for Hurricane Michael

Georgia EMA and Arizona DEMA Again Team to Create and Host ArcGIS Feature Service with SABER Status
Tuesday and Wednesday Morning -
SABER Status Map and Mobile App

[Image of SABER Status Map]

Getting Businesses Back
in Business Faster

CURRENT STATUS
CLOSURE AND DISRUPTION
INFORMATION PROVIDED BY PRIVATE
SECTOR MEMBERS OF SABER

This view of SABER member status is provided by SpotOnResponse, the mobile app and web application for Location-Based Situational Awareness and Trusted Crowd-Sourcing.

SpotOnResponse provides this "view only" look at closure and disruption information to SABERspace users. You can provide private and public crowdsourced data for location-based reports.

The mobile app is used to provide information to incident responders back home and to provide instructions and updates to remote members of your business community or response team. Public sector organizations are invited to discuss both the mobile app and web application as a supplement to existing incident management systems.

[Map with various store statuses and locations]
Wednesday Landfall - GEMA ArcGIS
Thursday Panhandle Starts to Reopen – SpotOnResponse
Thursday Number Still Increase – Unified Information Portal

Thanks to Trustedops.com
Friday, Numbers Climb
Friday-Saturday Significant Reopenings Across Whole Region
Sunday Reduced to Pockets of Disruption

SABER
Single Automated Business Exchange for Reporting

Total Business Disruptions (filtered by map extent)
84

SABER is the single location for private sector organizations to deposit their operations disruption and restoration information to be shared with authorized government agencies and other approved organizations.

Business Disruption Category

- Walmart-Closed
- CVS-Closed
- Closed-BIGBOX
- Target-Closed
- Sears-Closed
- Closed-FOO
- Closed-HOTEL
- Closed-FUEL
Monday-Tuesday Aid Still Need in Landfall Area
SABER Operational Use Cases
Case 1: Automated Status Direct from Company

• Sources
  – Utility
  – Security
  – Personnel
  – Business Continuity

• Methods
  – Shared File
  – Dynamic Output
  – Query
Case 2: Stores Call to Company Ops Center

Portal  EOC and Mapping
Case 3: Direct Submit by Stores or District Managers
Case 4: Calls/Emails to Business
Emergency Operations Center (BEOC)
Case 5: Store or District Managers to Company HQ Via Mobile App

Situational Awareness, Company Instructions, Company Plans and Procedures Government Agencies Provide Instructions, Plus Pager-like Alerts to Request Updates
Case 5: Store or District Managers Via Mobile App to SABER

Status provided to SABER is defined and limited by company.

Public Portal
EOC and Mapping
Case 6: BEOC Provides Mobile App to Members for Situational Awareness

SABER Provides Constant Situational Awareness from Hazard Monitoring, Government Agencies Provide Instructions, Plus Pager-like Alerts to Request Updates
Case 6: Members Use Situational Awareness App to Report Status to BEOC
Case 6: A Business Emergency Operations Center in Your Pocket

PROVIDE TO ALL BEOC MEMBERS A TOOL FOR EVERY DAY – AND EMERGENCY

• Members get:
  – Situational Awareness
  – Easily report problem with operating status
  – Track employees unable to return to work

• BEOC gets:
  – Business Status
  – Physical damage to work facility
  – Problem with supporting infrastructure (water, electricity, gas)
  – Problem with communications (phone, Internet, etc.)
  – Problem with transportation access (employees, consumers, and transporters)
  – Problem with resupply of commodities or raw materials (supply chain)
  – Problem with financial transactions
Case 7: Empower Employees In Addition to SABER Reporting

Hazard Awareness, Company Instructions, Employee Status and Ability to Report to Work, Plus Company Plans and Procedures
Case 7: Employee Availability for Management Decisions

Management and Colleagues Know Location and Status of Individual Employees Plus Photos and On-Scene Reports

Management Knows Status of All Employees

Employee Reports Status
Case 7: SABER Receives Selected Status from Company

Status provided to SABER is defined and limited by company.

Public Portal

EOC and Mapping
Case 7: Business Continuity and Status Reporting Rolled into One Mobile App

People ... employees who are your assets ... employees who must be available to come to work, report to duty stations, in order for the organization to operate

Arm them with the tools to:
• Be notified they are needed
• Respond with availability
• Give instructions
• Check in to duty
• Keep informed what is going on
Result of All Cases: Understand Business Status to Business Get Back to Business

- Understand scope and range of emergency
  - Bellwether Early Indicators
  - Authoritative Open/Closed/Limited Hours
- Make informed decisions on returning business to early/partial operations for community restoration
  - Damages to facility
  - Employee availability
  - Operational factors (electricity, Internet, water, fuel, roads)
- Track stabilization of businesses to prioritize resource allocation
  - Government allocation of response and recovery resources
  - Business-to-business brokering to maximize community welfare
- Monitor return to normalcy
  - Government and business decisions should maximize business growth
  - Identify and provide what business needs to reopen fully and profitably
  - Measure ability of business to sustain community regrowth
Enroll at www.SABERspace.org

Getting Businesses Back to Business Faster

James W. Morentz, Ph.D.
Executive Director
Jim@SABERspace.org
301-467-4242
Q&A

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Quiz

• Following the webinar you will be prompted to complete a quiz
• Complete the quiz to receive your continuing education units (CEUs) for this session