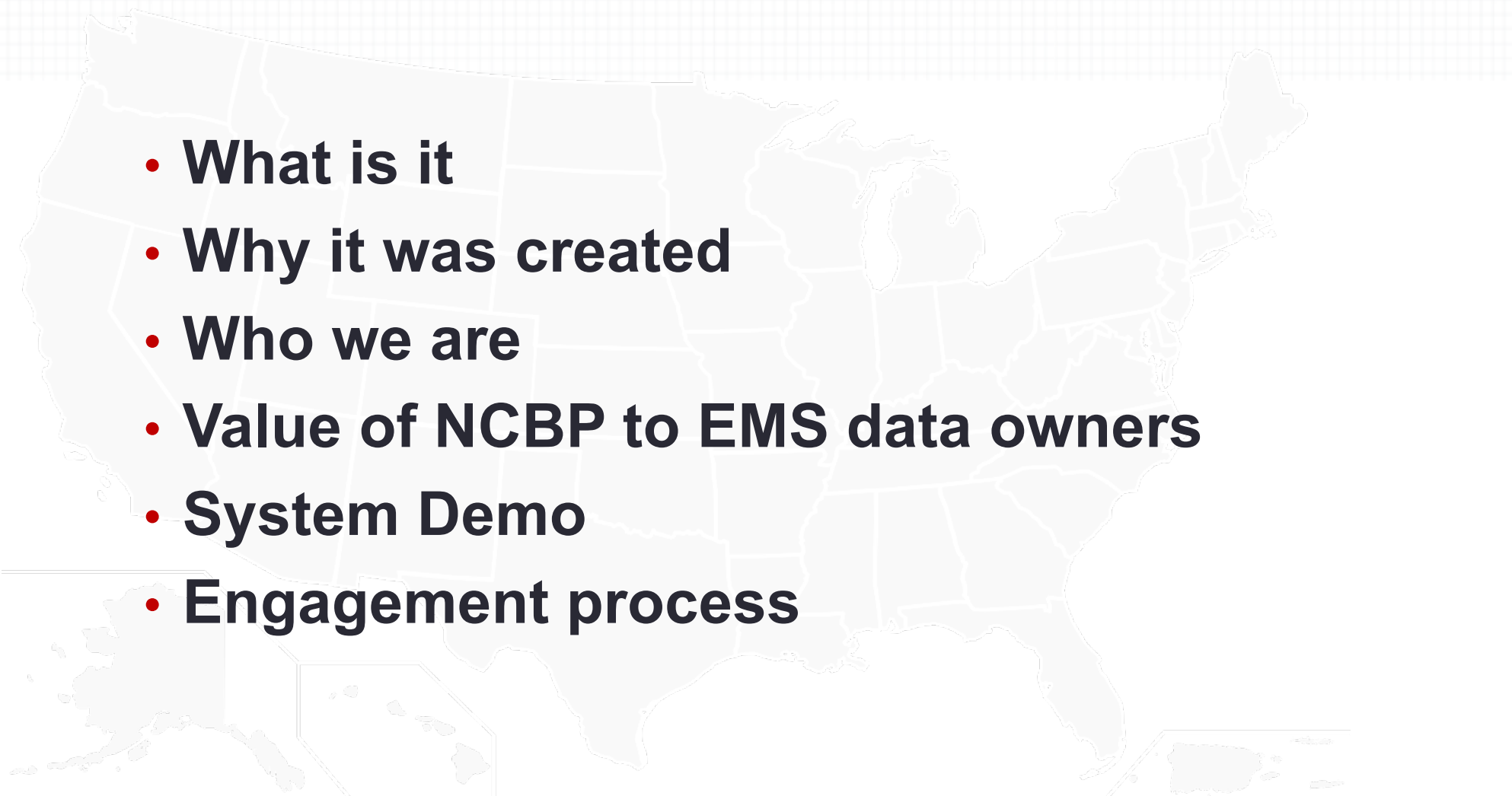# EMS BUSINESS INTELLIGENCE INFORMING NATIONAL PREPAREDNESS
## THE NATIONAL COLLABORATIVE FOR BIO-PREPAREDNESS

**National Collaborative for BioPreparedness**

- **What is it**
- **Why it was created**
- **Who we are**
- **Value of NCBP to EMS data owners**
- **System Demo**
- **Engagement process**

# WHAT IT IS

- **A collaboration of owners of data that expose threats to health and safety**

- **Visualization and analytics system provided to data owners at no cost**

- **Mature technology under development since 2011**

- **National integration and expansion in process**

- **Result:**
  - National, near real time disease syndromic warning and tracking system
  - Business intelligence for data owners

- **Funded by Department of Homeland Security**
- **To address a major gap in national biosurveillance**
  - Human health
  - Animal health
  - Food security
  - Environmental hazards
- **To enhance interaction of the national preparedness enterprise**
  - Public health preparedness
  - Emergency responders
  - Emergency management
  - Public safety / law enforcement
  - Private sector infrastructure operators

- **University of North Carolina at Chapel Hill – Dr. Mark Holmes**
  - Research and development
  - Network development
- **Director: Jeff Runge, MD**
  - Emergency/EMS physician
  - Head of NHTSA (2001-2005)
  - CMO of US Homeland Security (2005-2008)
- **Network development: Debra Durham, Heather Connell**
  - US Navy, US Secret Service, DHS Science and Technology, Purdue U
- **Analytics: Kristina Howard, Perduco Group**
  - US Army, DHS Office of Health Affairs Biosurveillance
- **Commercial Platform: Paul Runkle, Jon Woodworth, Biospatial, Inc.**
  - Providers of wide area surveillance and visual analytics to U.S. intelligence services

- **Using existing data:**
  - Federal and national authorities need biological information derived form data that is already being gathered

- **Connections:**
  - Connect data owners to preparedness community through a collaborative tool

- **Analytics:**
  - Overlay data sets, apply custom analytics that improve business processes of both data owners and preparedness authorities

# DUAL GOAL

- **Improved national biopreparedness**
  - Government agencies better equipped to protect public for significant health events
    - Naturally-occurring health events
    - Biological or chemical terrorism
    - Unexpected outbreaks – opioids, enterovirus, Ebola, VBD

- **Improved Service Optimization**
  - Local and state officials receive real-time business intelligence for service optimization
  - Enhance collaboration between emergency response, emergency management, and public safety / law enforcement

- There is no cost to the data owner.

- Federal government subscribes to derivative information

- Data belongs to the data owners

- Highest levels of security are maintained (HIPAA, HITECH, FISMA)

- Critical information is derived from raw data without exposing the raw data

- **NCBP partners with states and local agencies, professional associations, and commercial data owners to form the Collaborative**

- **NCBP provides data management, security and analytics to turn data into information**

- **NCBP provides visualization and analytics at no monetary cost to the data owners**

- **The Federal government subscribes to the system to gain access to the derivative information (but not the raw data)**

# HIPAA AND DATA SECURITY

## NCBP operates in full HIPAA-compliance

- Environment is HIPAA/HITECH compliant
- NCBP staff HIPAA trained and certified
- Data owners and NCBP operate as Business Associates
- NCBP system and policies are evaluated by external HIPAA consultant annually
- User organizations administer data access rights to appropriately trained users

## NCBP operates in a maximum security environment

- NCBP management experience in classified systems
- Data environment FISMA-aligned
- Data fully encrypted in transfer and at rest
- Data owners retain full control of who can see what data

# NCBP Syndromic Alerts

- **Respiratory syndromes**
  - Biological weapons – tularemia, anthrax, plague
  - Naturally occurring respiratory dz – EVD 68
- **Influenza-like illness**
  - Seasonal or pandemic
  - Novel ILI syndromes
- **Constitutional syndromes**
  - Botulism, occult poisonings
- **Opioid syndromes**
  - Heroin, Fentanyl derivatives – intentional, unintentional
- **Motor vehicle injury**
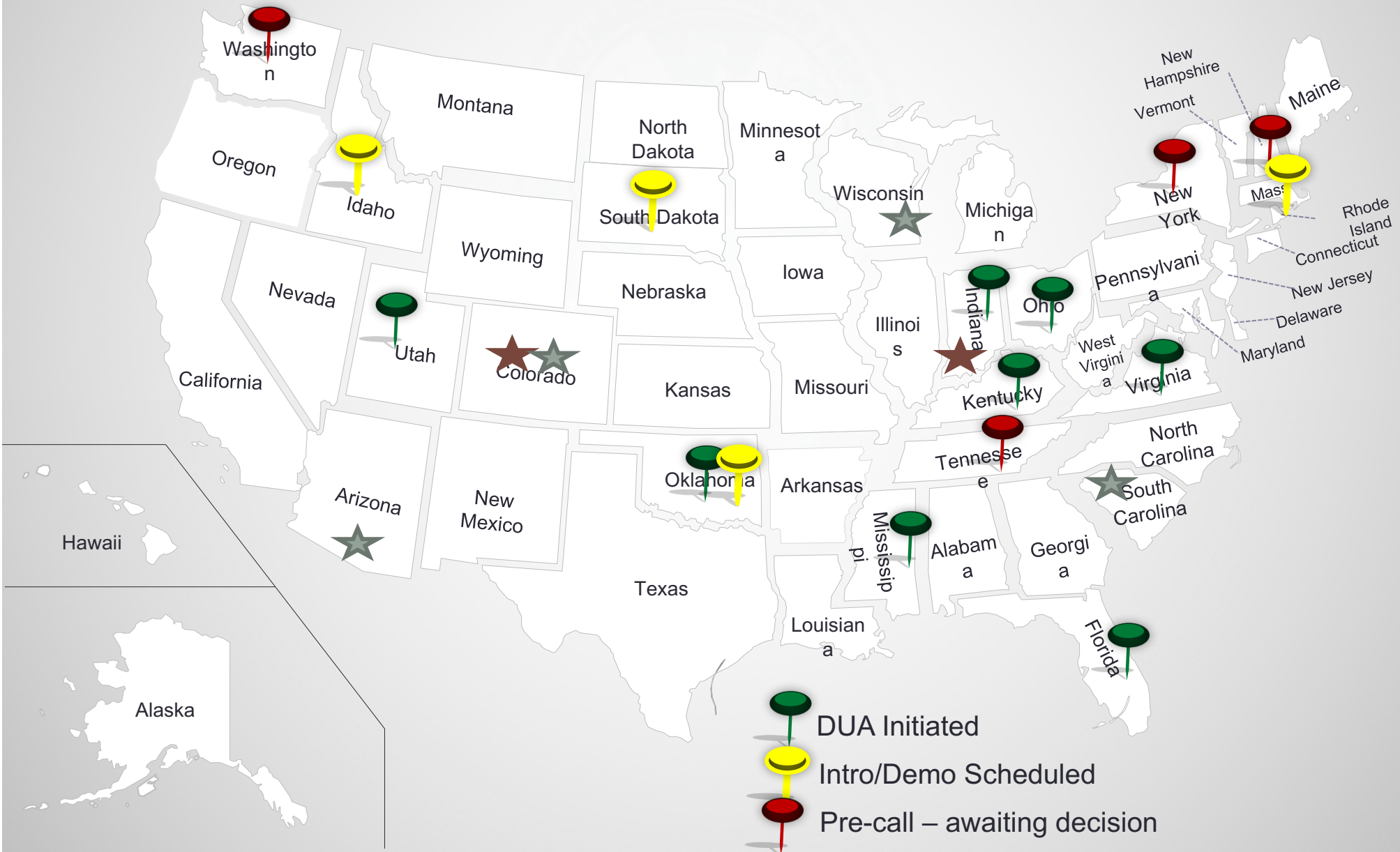  - Injury crashes with location, time clustering

# DATA REQUIREMENTS

- **NEMSIS V2 or V3**
  - 121 elements
- **Streamlined onboarding process**
  - Data Use and Business Associate Agreements
  - Test data
  - Organizational user access defined
  - Automated ETL routines applied
  - System credentials granted
  - System available to organization
- **Requires little effort from data owner after setup**
  - Sporadic troubleshooting
  - Participation in user groups (important but optional)

# NCBP Goals

**Accelerate nation's bio-preparedness**
Provide early detection of threats to health and safety to enable timely intervention

**Synergize network of observers**
Establish a network of owners of biological data willing to collaborate with federal, state and local officials to improve preparedness and event response

**Enable improved service optimization**
Leverage data owners' data to improve their business processes, quality assurance and improvement, patient experience and operational priorities

# Value/Benefits to Data Owners

**Visualization of EMS organization's own data**

**Access to information in near-real time**

**Improved shared situational awareness and decision quality**

**Ensured HIPAA-compliant environment**

**No cost service for data contributors**

# NEXT STEPS FOR COLLABORATION



**Visit www.bioprep.us**

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