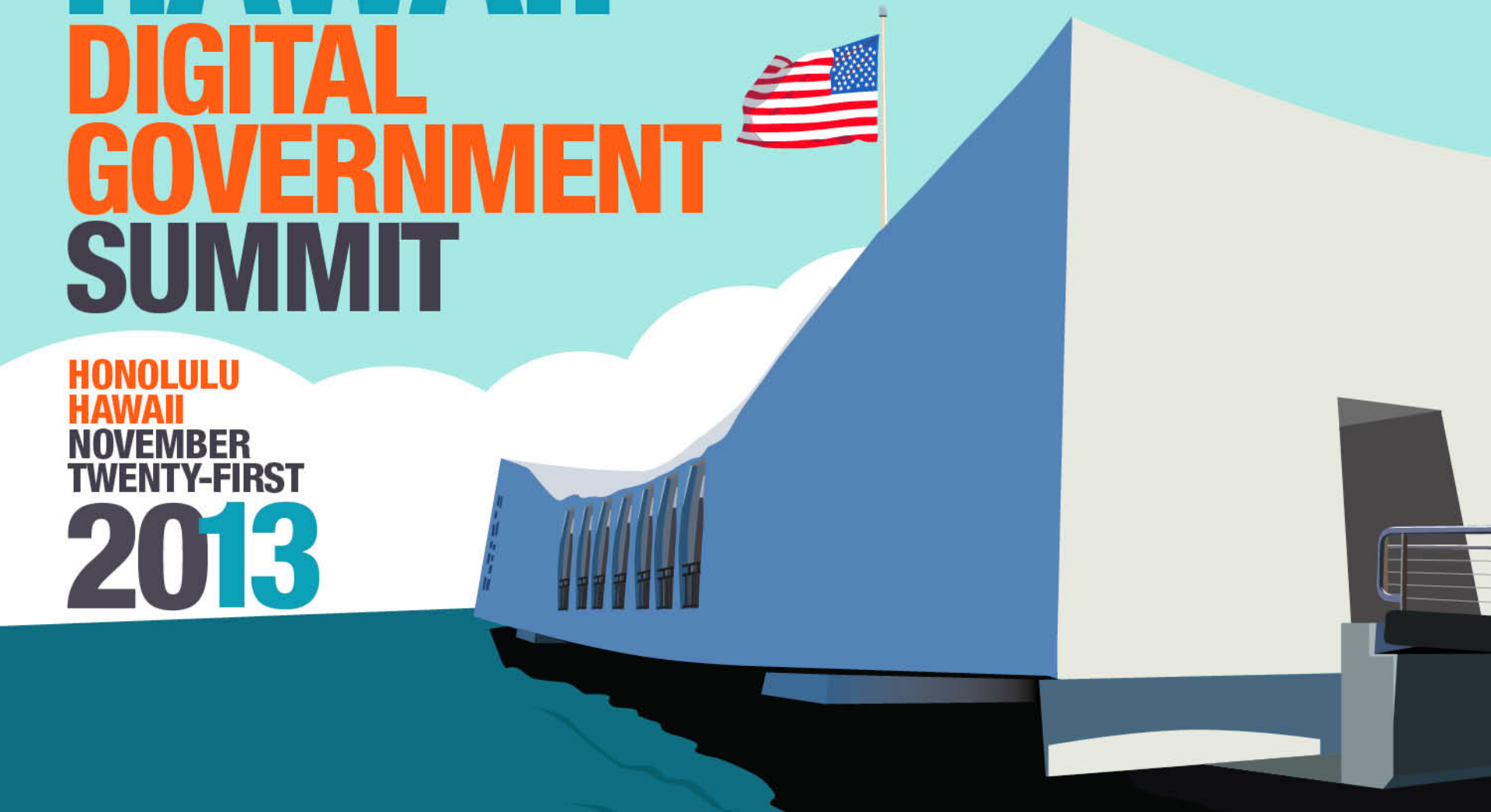
GOVERNMENT TECHNOLOGY®

HAWAII DIGITAL GOVERNMENT SUMMIT

HONOLULU
HAWAII
NOVEMBER
TWENTY-FIRST
2013



- Moderator:
  - Victoria Garcia, State of Hawaii Statewide Interoperability Coordinator (SWIC)
- Panelists:
  - Darcy Ziegler, Public Safety Communications Research (PSCR) Program, Project Manager
  - Jacob Verkerke, Director IT Services Division, County of Maui
  - Don Jacobs, Director Information Technology, County of Hawaii
  - Todd Crosby, Special Assistant to the CIO, State of Hawaii
  - Warren Izumigawa, HPD Dept'l Radio Communications Coordinator

- **Session B8**
  - **NATIONWIDE PUBLIC SAFETY BROADBAND NETWORK**

- **Problem Statement**
  - What are the unique aspects of the State of Hawaii that must be considered and researched in the proposed deployment of a nationwide public safety broadband network (NPSBN) by FirstNet?

- **Alignment with State Transformation Plan**
  - **Business Transformation**

- **Definition:**
  - The Nationwide Public Safety Broadband Network (NPSBN), often referred to as FirstNet, will be the first high-speed wireless, broadband data network dedicated to public safety. It will be a single, nationwide network that facilitates communication for public safety users during emergencies and on the job every day.
- **Background**
  - Today, public safety communicates over different networks. Communications shortcomings are amplified during emergencies.
  - After 9/11, public safety community fought hard to convince Congress it needed a dedicated, reliable, interoperable network to provide advanced data communications capabilities nationwide
  - The Middle Class Tax Relief and Job Creation Act, PL-112-96, February 22, 2012 created the First Responder Network Auth

- **Public Safety Communications Research (PSCR) Program**

Located at the Department of Commerce Boulder Labs in Colorado

The PSCR Program is a joint effort between:

NIST's Office of Law Enforcement Standards (OLES) and NTIA's Institute for Telecommunication Sciences (ITS)

- VISION

The response community nationwide can exchange voice and data seamlessly to effectively respond to any incident or emergency.

Seamless voice and data exchange refers to the ability of the response community to interoperate with each other on demand, in real time, when needed, and when authorized.

- MISSION

To fulfill this vision, PSCR will act as an objective technical advisor and laboratory to public safety to accelerate the adoption and implementation of only the most critical public safety communication standards and technologies.

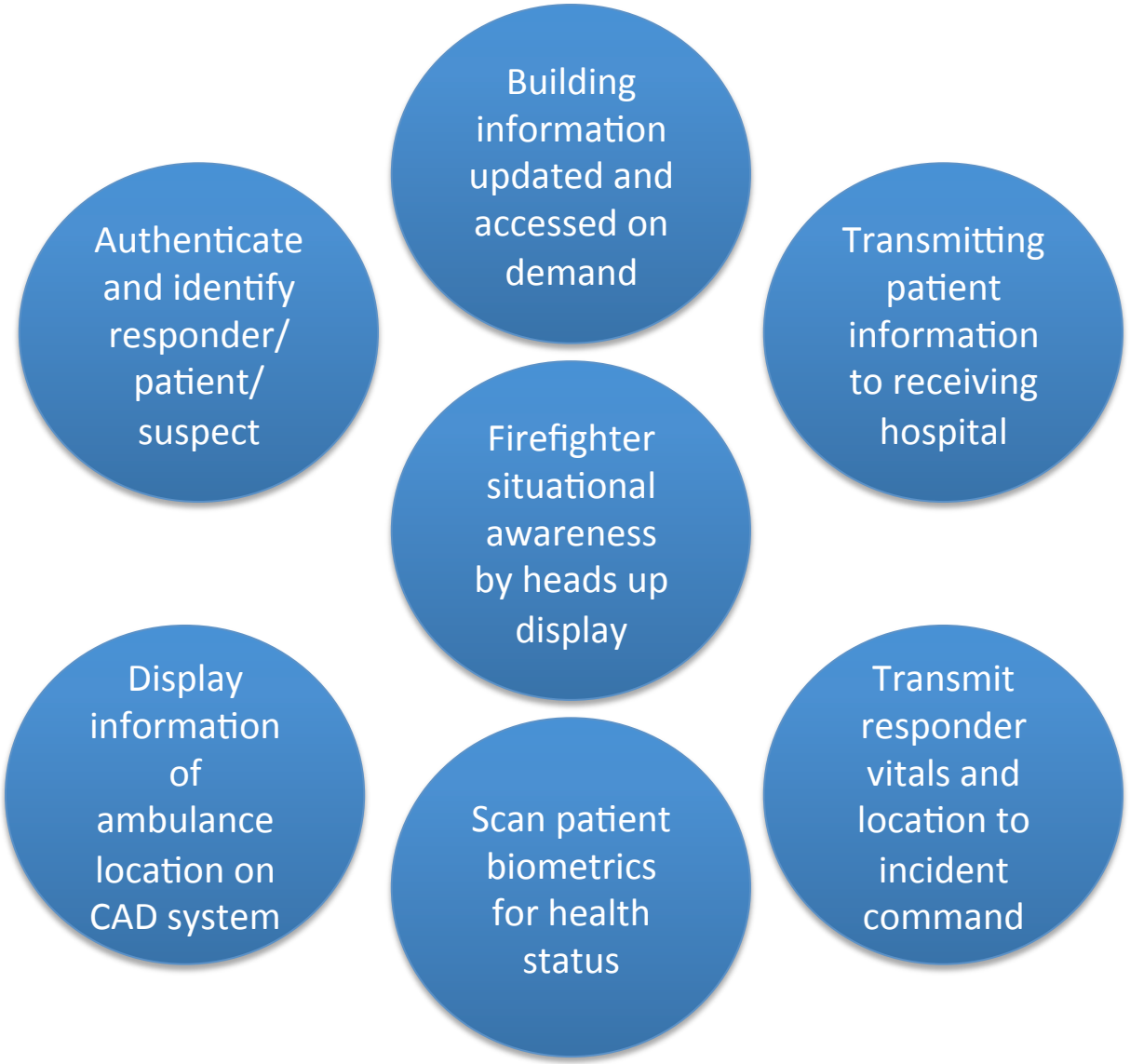
LMR Standards and Technologies	Broadband Standards and Technologies	Emerging Standards and Technologies
P25 Standards and CAP	Demonstration Network	Bridging LMR & LTE
P25 Test Tools and Simulation	Requirements and Standards	Video Quality
Public Safety VoIP	Mission Critical Voice	Security
Audio Quality	Modeling and Simulation	
RF Propagation Studies		

- PSCR Core Capabilities
  - Requirements Gathering
    - Bring public safety practitioners together to identify and document their needs
  - Standards Development
    - Represent public safety's unique requirements in standards bodies to ensure products meet public safety's needs
  - 700 MHz Public Safety Broadband Demonstration Network
    - First-of-its-kind demonstration network in Boulder, Colorado
    - Most vendor-diverse 700 MHz OTA network in the world
    - Over 75 Cooperative Research and Development Agreements (CRADAs)
  - Modeling & Simulation
    - Develop custom modeling tools to model coverage, performance, etc. for public safety broadband network

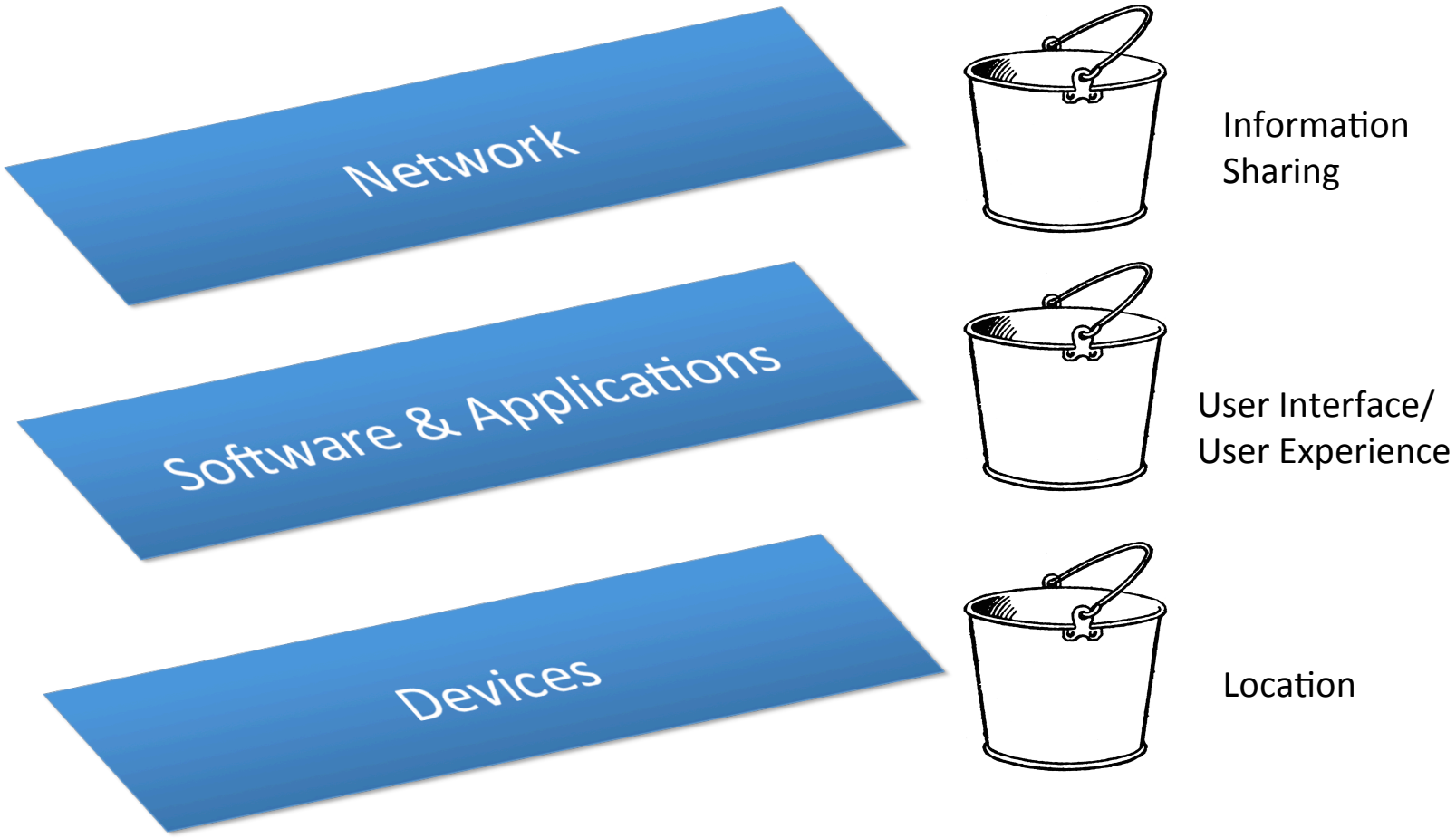
- PL 112-96, "Middle Class Tax Relief and Jobs Creation Act of 2012"
  - Section 6303: NIST Directed Research and Development Plan
    1. Document public safety wireless communications technical requirements;
    2. Accelerate the development of the capability for communications;
    3. Establish a research plan, and direct research;
    4. Accelerate the development of mission critical voice;
    5. Accelerate the development of communications technology and equipment that can facilitate the eventual migration of public safety narrowband communications to the nationwide public safety broadband network; and
    6. Convene working groups of relevant government and commercial parties to achieve the requirements above

- PSCR Research & Development (R&D) Roadmap Workshop
  - Goal: Highlight needs for public safety broadband R&D beyond the short term horizon (18-24 months) and begin to identify research areas that need to be developed over the long term (5-10+ years) in order for a public safety broadband network to fulfill its ultimate goals.
  - November 13-15, 2013 at the Department of Commerce Labs in Boulder, Colorado
    - Day 1:
      - Context Setting from PSCR and FirstNet
      - Identify *Discrete Actions* and *Enabling Technology Capabilities* from 2006 SAFECOM Law Enforcement, Fire, EMS scenarios
      - Assign *Enabling Technology Capabilities* to their relevant lanes: Network, Software/Applications, or Devices/Hardware
    - Day 2:
      - "Bucket" similar/related *Enabling Technology Capabilities*
      - Prioritize *Technology Buckets* based on *Criteria* presented by FirstNet Deputy General Manager TJ Kennedy

Sample Discrete Actions



Layers & Buckets

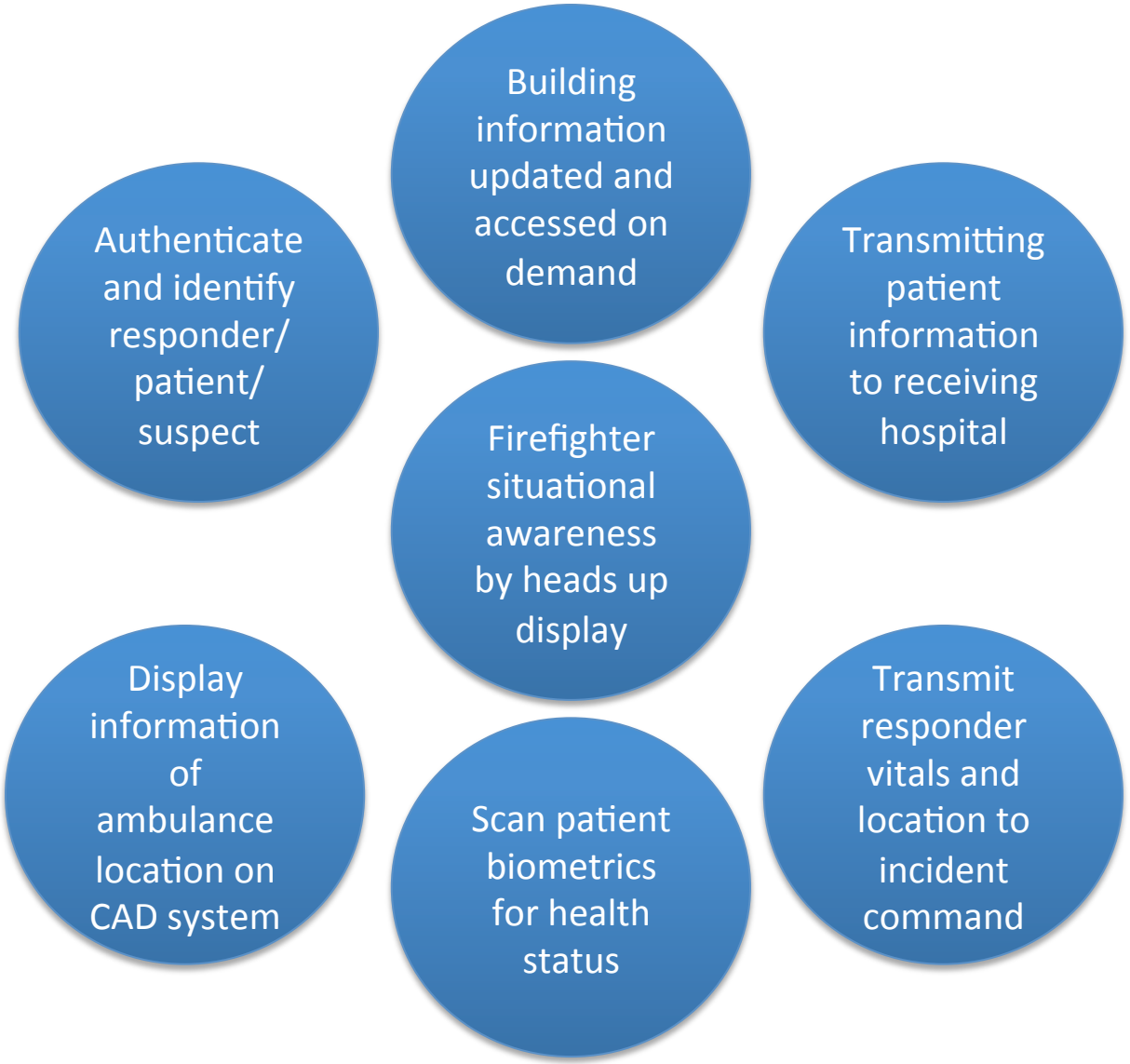


Technology Capabilities in Network Layer

Information Sharing Bucket

Real-time structure database
Seamless data sharing
Cross agency information sharing interfaces
Automatic/real-time download of all data collected by ambulance to hospital
Hospitals communicate between each other about available capacity
Automatic notification to dispatch pre-health crisis
Backwards compatible standardized interfaces for systems, databases, and applications
Authorized, incident based local data sharing capability
Multimedia to CAD system conversion
Unified database of patient needs with HIPPA and Security
Tie into existing camera networks

Sample Discrete Actions



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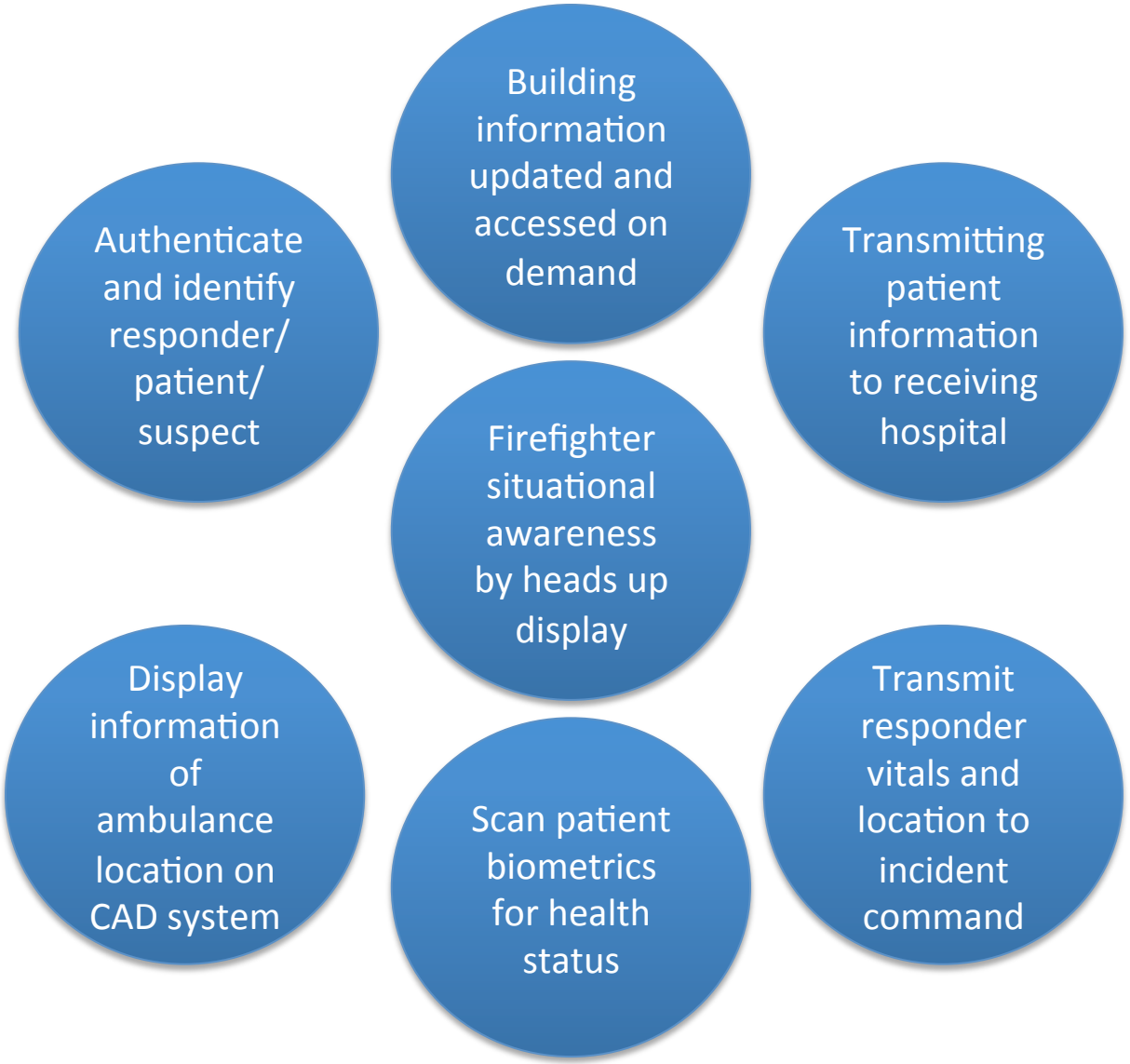

- R&D Roadmap Information:
  - http://www.pscr.gov/about_pscr/highlights/pscr_psbb_roadmap_workshop_112013/2013_pscr_psbb_roadmap_workshop.php
- PSCR Annual Stakeholder Conference
  - Tentatively scheduled for June 2-5, 2014 in Westminster, CO
- Email distribution list: 700MHz@pscr.gov
- Requirements gathering efforts:
  - NPSTC Broadband Working Group: bbwg@pscr.gov
- **Learn more at www.pscr.gov**

Thank you!

Darcy Ziegler

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- Local Concerns:
  - Topography
  - Unique challenge of each island being separated by water
  - Coverage
    - Mandated vs. actual requirements
  - Converging Technologies

- **Summary**
  - Key Lesson(s) Learned and Best Practice(s)
  - Next Steps: Identify areas that need additional research, particularly as relates to our State of Hawaii
  - How can you help? This effort will take involvement of all public safety stakeholders in Hawaii. Contact Victoria or Todd below to arrange for presentations to stakeholder groups
  - Contacts in Hawaii
    - THE STATE SINGLE POINT OF CONTACT IS CIO SANJEEV "SONNY" BHAGOWALIA; THE SWIC, VICTORIA GARCIA, IS MANAGING THE GRANT. SHE AND TODD CROSBY OF OIMT ARE THE FIRST LINE CONTACTS IN HAWAII.
      - Victoria.garcia@hawaii.gov
      - Todd.A.Crosby@hawaii.gov