Next Generation 9-1-1
& FirstNet
Improving Emergency Communications

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NCC
National Coordinating Center
for Communications

Next Generation 9-1-1
& FirstNet
# Improving Emergency Communications

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- **Integration between FirstNet and NG9-1-1 is a critical in order to achieve success for public safety.**

- **NG9-1-1 and FirstNet represent the two halves of public safety request and response. The PSAP is the nerve center in the middle.**

- **PSAPs will be more than simply call taking or dispatching centers.**

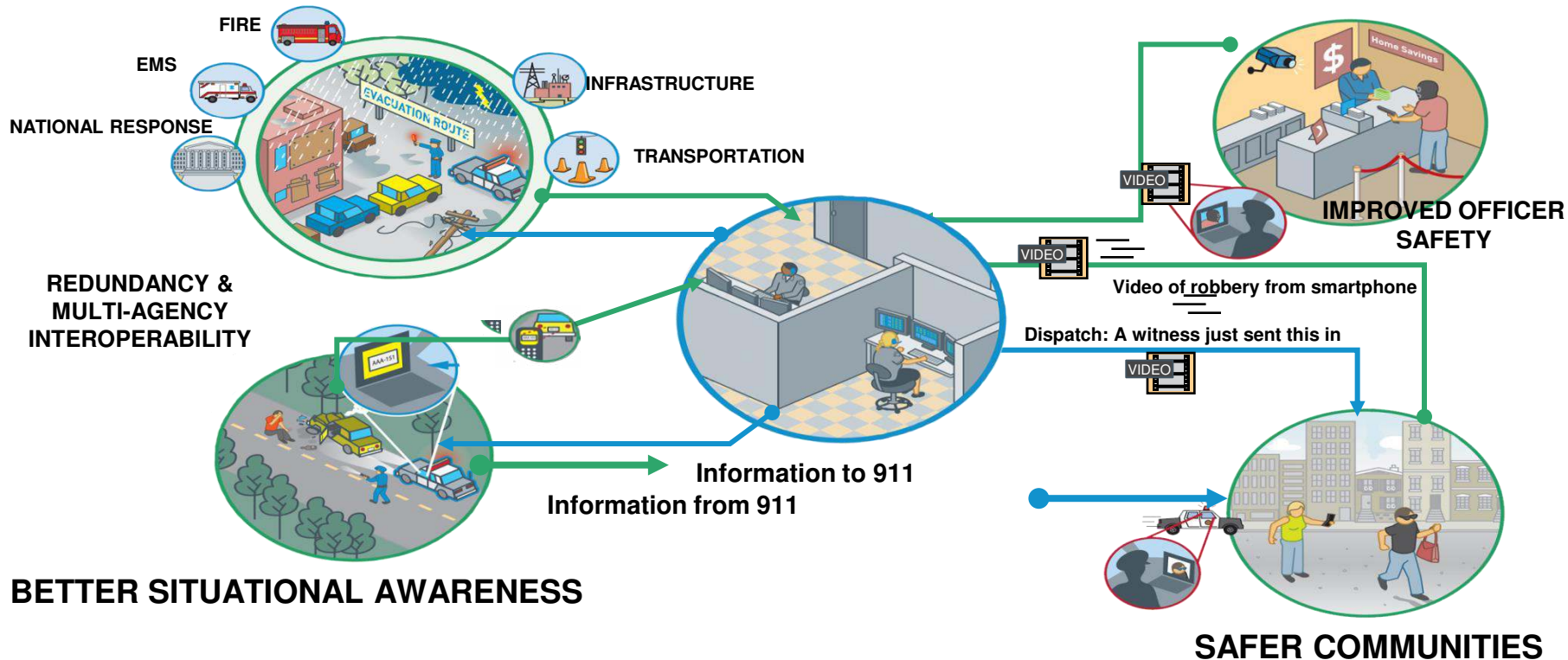- **The use of standards based, non-proprietary approach is important.**

Basic Architecture

NG9-1-1

FirstNet®

Data

LMR

Voice

PSAP

Application

Pipe

App <-> Human <-> App

Pipe

Application
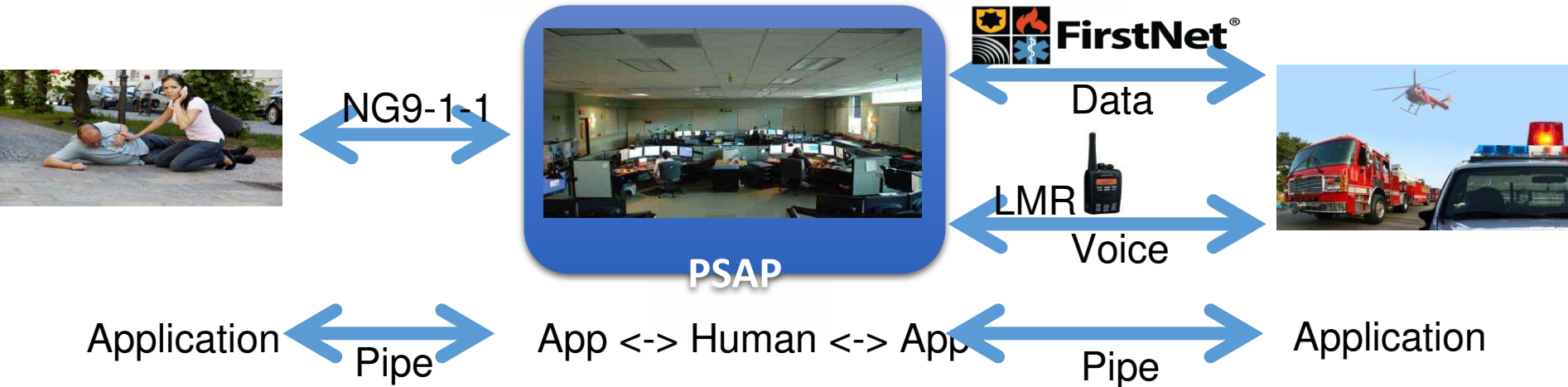
The **PSAP** Integrates **NG911** and **FirstNet**®

FirstNet Shared Goals With NG9-1-1

- <u>Technology Modernization</u>: Both represent efforts to update voice centric legacy systems to IP based architecture to allow telecommunicators and first responders to leverage information in multiple media formats

- <u>National Focus</u>: Both aim for broadband connectivity in urban, rural, remote communities

- <u>Improved Emergency Response</u>:   Both seek to enhance communications and coordination of responses to requests for public safety assistance

- <u>Planning & Governance</u>: Both require planning and governance to ensure successful deployments

FIRE

EMS

NATIONAL RESPONSE

INFRASTRUCTURE

TRANSPORTATION

REDUNDANCY & MULTI-AGENCY INTEROPERABILITY

IMPROVED OFFICER SAFETY

VIDEO

Video of robbery from smartphone

VIDEO

Dispatch: A witness just sent this in

VIDEO

Information to 911
Information from 911

BETTER SITUATIONAL AWARENESS

SAFER COMMUNITIES

Questions for the Future

- – Data Interoperability, Standardization and Interchange
    - o NG911 -> PSAP -> Responder
    - o NG911 -> PSAP -> ESINET -> PSAP -> Mutual Aid Responder
    - o Responder ->PSAP -> ESINET -> PSAP -> Mutual Aid Responder
    - o VHS or Beta
- – What technology is needed in a PSAP to open a photo or video, make a decision on its value and potentially send it to a responder or save it to an archive as evidence?
- – What Standard Operating Procedures, Multi-Disciplinary Planning and training is required to enable the "Telecommunicator of the Future"

How Do We Get There

- Define the Data Interchange that must exist within a PSAP to ensure that a call for service artifact can be received from NG911, processed by the PSAP and sent to a First Responder.
- Prepare the PSAP to make this exchange with technology and standard operating procedure
- Integrate NG911 to the PSAP
- Integrate FirstNet to the PSAP
- Train and Equip the Telecommunicators
- Launch the service

NG9-1-1 Security

- With advancement of technology comes an increased threat of infiltration and exploitation of the system
- NG9-1-1 systems and ESINets will be vulnerable to the same threats as existing IP networks and systems
- Must consider shared architectures and approach
- Training and awareness are important considerations
- Our people, not just the equipment, are key
- There are resources "out there"
  - TFOPA work underway
  - NIST, US-CERT, DHS all have products available

What is the Common Denominator During an Emergency?

ALL Emergencies are _LOCAL._

Interoperability of both voice and data services is critical as incidents unfold and expand.

Next Generation services can provide that interoperability

Local
State
Regional
Federal

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QUESTIONS?

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