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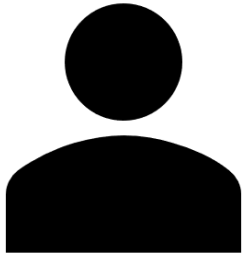


Public Safety Cybersecurity: **America's 911 Centers Are At Risk**

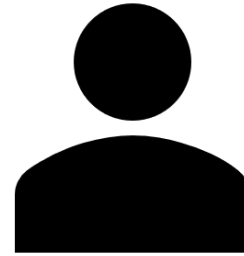


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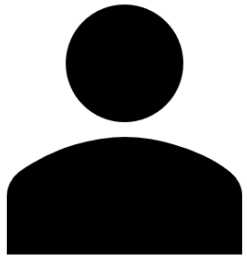
Panel Introductions



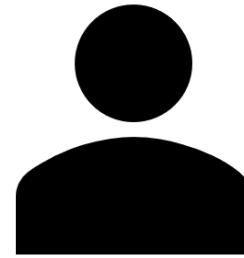
Laurie Flaherty
*Coordinator
National 911 Program,
Department of Transportation*



Tyrell Morris
*Executive Director
Orleans Parish Communication District*



Mary Boyd
*Chair
Federal Communications Commission
(FCC) Communications Security,
Reliability, and Interoperability Council
VII (CSRIC) Working Group IV (WG4)*



Brandon Abley
*Director of Technical Issues
NENA: The 9-1-1 Association*



911 Threat Landscape

911's digital transformation requires lifecycle risk management, including cybersecurity

Cyber Incidents

37%

Indicated that cybersecurity incidents impacted their ability to communicate over the past five years

CSRIC Resources

- [Task Force on Optimal Public Safety Answering Point Architecture](#)
- CSRIC V: [Evolving 911 Services](#)
- CSRIC VI: [Transition Path to Next Generation 911 \(NG911\)](#)
- CSRIC VII: [911 Security Vulnerabilities – During NG911 Transition](#)



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Data from the [2018 SAFECOM Nationwide Survey Results](#). The SNS is a nationwide data collection effort to obtain actionable and critical data that drives our nation's emergency communication policies, programs, and funding.

911 Under Attack

Cyber threats to 911 centers are becoming more complex and sophisticated



Malware



Swatting



Ransomware



Unauthorized
Data Access



Telephony Denial
of Service (TDoS)



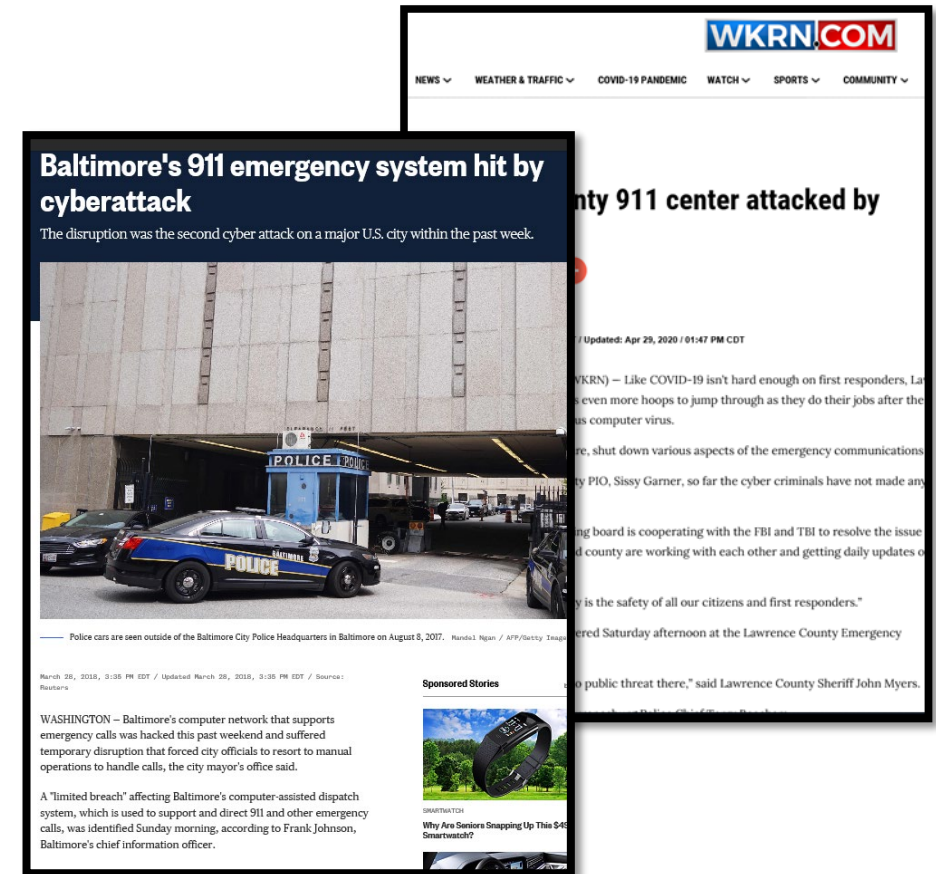
Unauthorized
Network Access



Spear-phishing



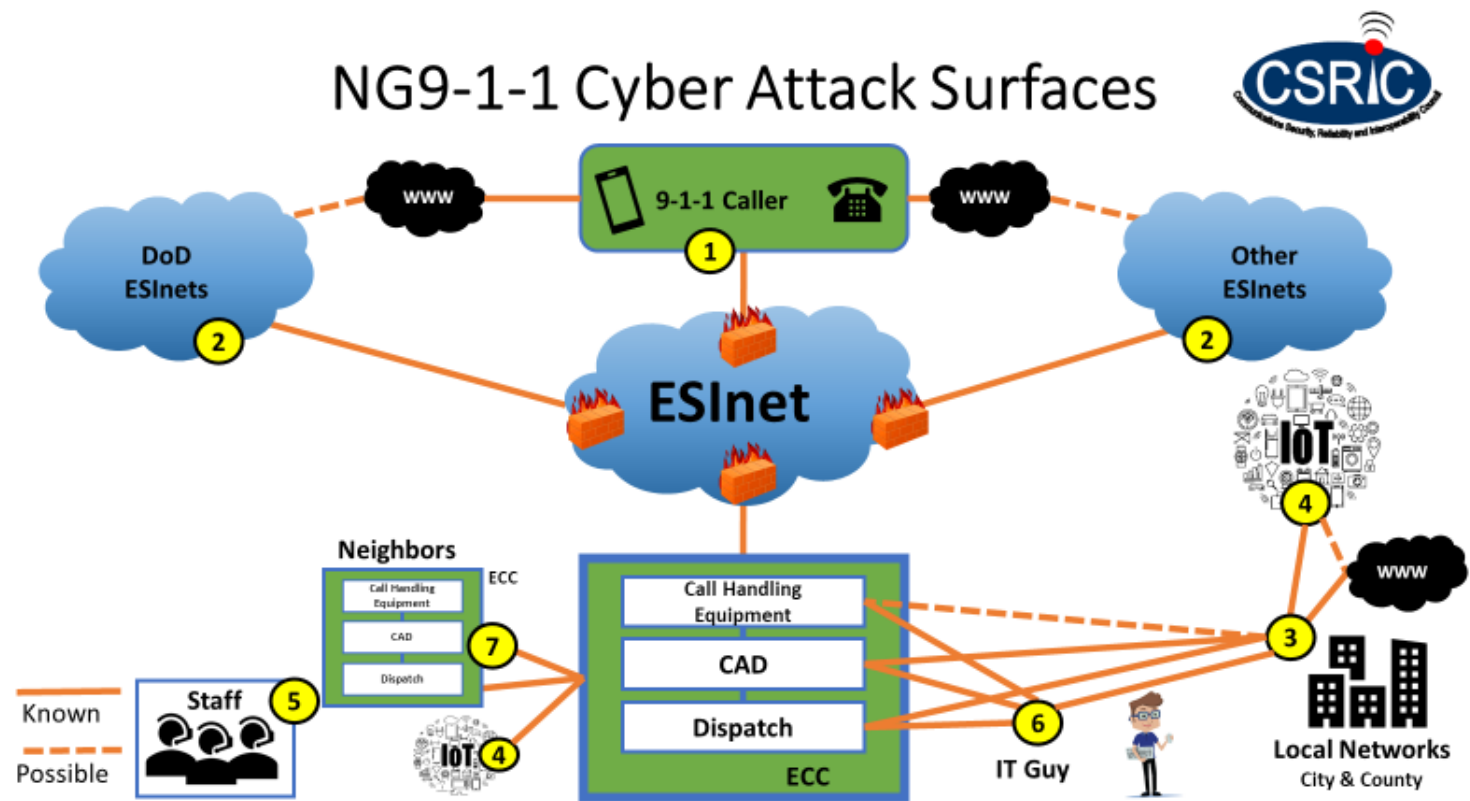
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Evolving Attack Surface

Everything is a threat—the 911 community must consider a very broad attack surface

- Recent recommendations developed by CSRIC consider a very broad attack surface; not just the emergency services network, but also external networks, staff, and the 911 caller
- A large number of easily-preventable cyber events originate not just by malicious actors, but also passive ones (e.g., your own employees)
- Implementing even basic, low-tech cybersecurity controls can greatly improve even a small, underfunded agency's security posture
- View the WG4 recommendations:
<https://www.fcc.gov/about-fcc/advisory-committees/communications-security-reliability-and-interoperability-council-vii>

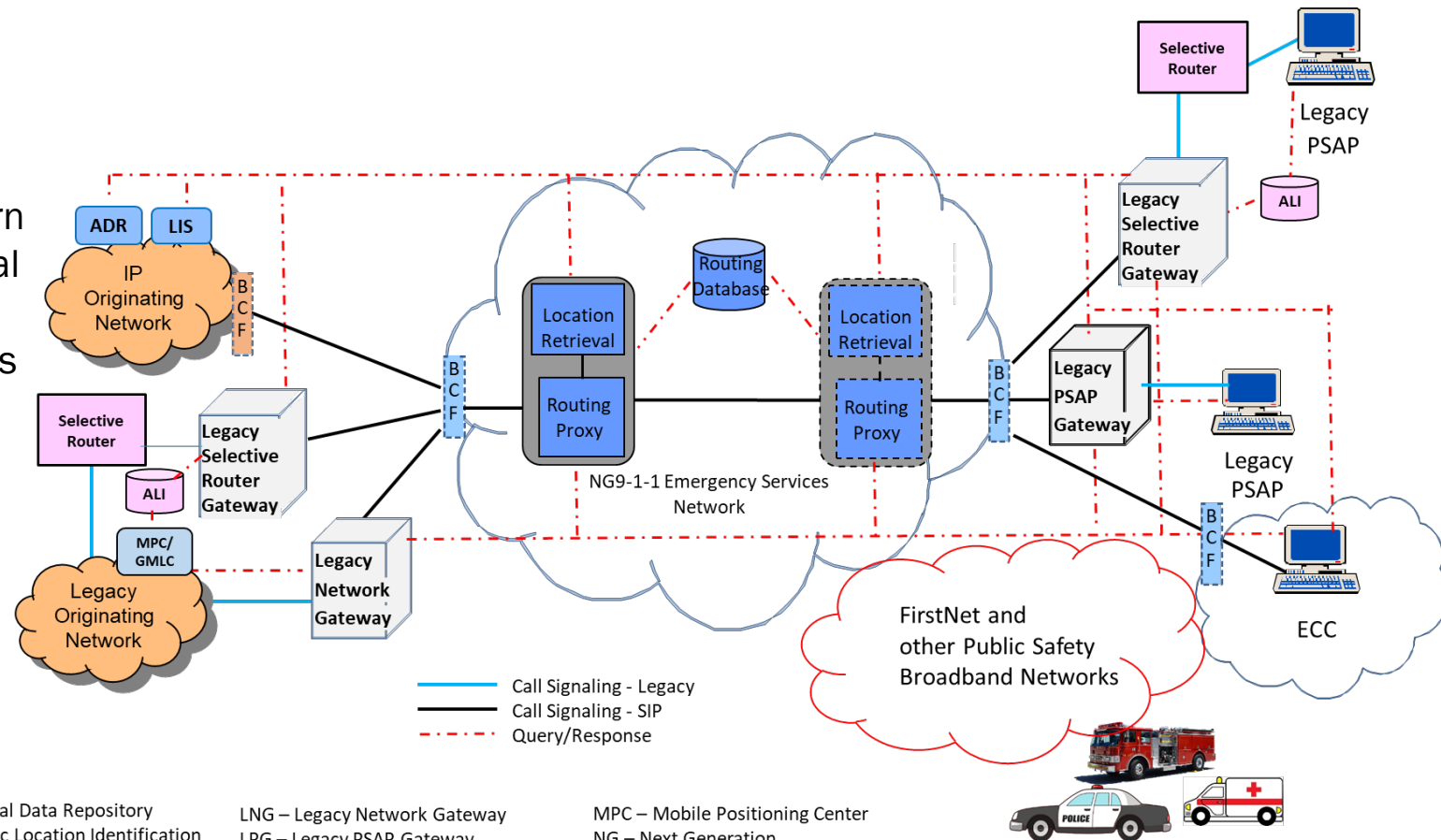


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Evolving Attack Surface (Continued)

Transitional NG911 exposes the broadest attack surface

- Transitional NG911 retains a similar attack surface as a legacy environment 911, such as TDoS
- However, the system is also exposed to a modern attack surface as well, such as distributed denial of service (DDoS), Domain Name System hijacking, and Session Initiation Protocol exploits
- Transitional NG911 may also not support all security mechanisms expected for end-state NG911
- Even a legacy 911 center is vulnerable to conventional attacks not unique to 911, like ransomware



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ADR – Additional Data Repository
ALI – Automatic Location Identification
BCF – Border Control Function
GMLC – Gateway Mobile Location Center

LNG – Legacy Network Gateway
LPG – Legacy PSAP Gateway
LIS – Location Information Server
LSRG – Legacy Selective Router Gateway

MPC – Mobile Positioning Center
NG – Next Generation
PSAP – Public Safety Answering Point
SR – Selective Router



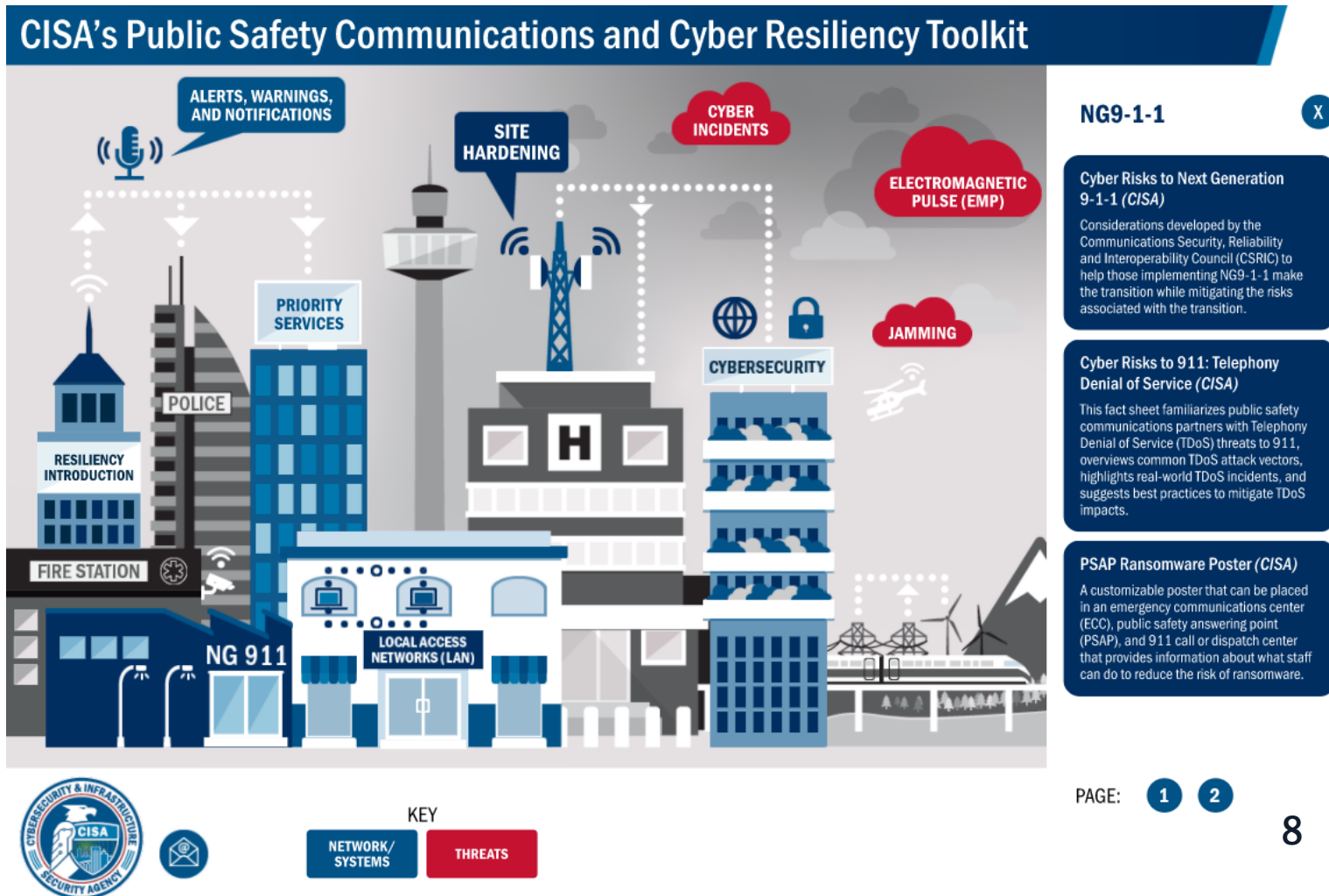
Cybersecurity Resources

Resources available at CISA.gov

- An interactive, expandable, web-based toolkit displaying 30 resources over 10 topic areas, including NG911
- Includes CISA guidance, as well as guidance from other government and industry sources
- Intended to describe emergent trends and issues, consolidate resources, educate stakeholders at all levels of government, and propose mitigations to enable resilient public safety communications
- <https://www.cisa.gov/publication/communications-resiliency>



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**For more information:
www.cisa.gov**

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