

CIRI | CRITICAL INFRASTRUCTURE
RESILIENCE INSTITUTE

A DEPARTMENT OF HOMELAND SECURITY CENTER OF EXCELLENCE

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Protecting our Nations NG9-1-1 System from Man Made and Natural Disasters

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Threat Vectors



- Cyber Security is the first that comes to mind.
- Other Causes

- Hurricanes
- Fire
- Pandemic
- Terrorists
- Equipment Failure
- Misconfiguration



Rebuilding efforts continue on 2nd Avenue

JUSTIN BEASLEY
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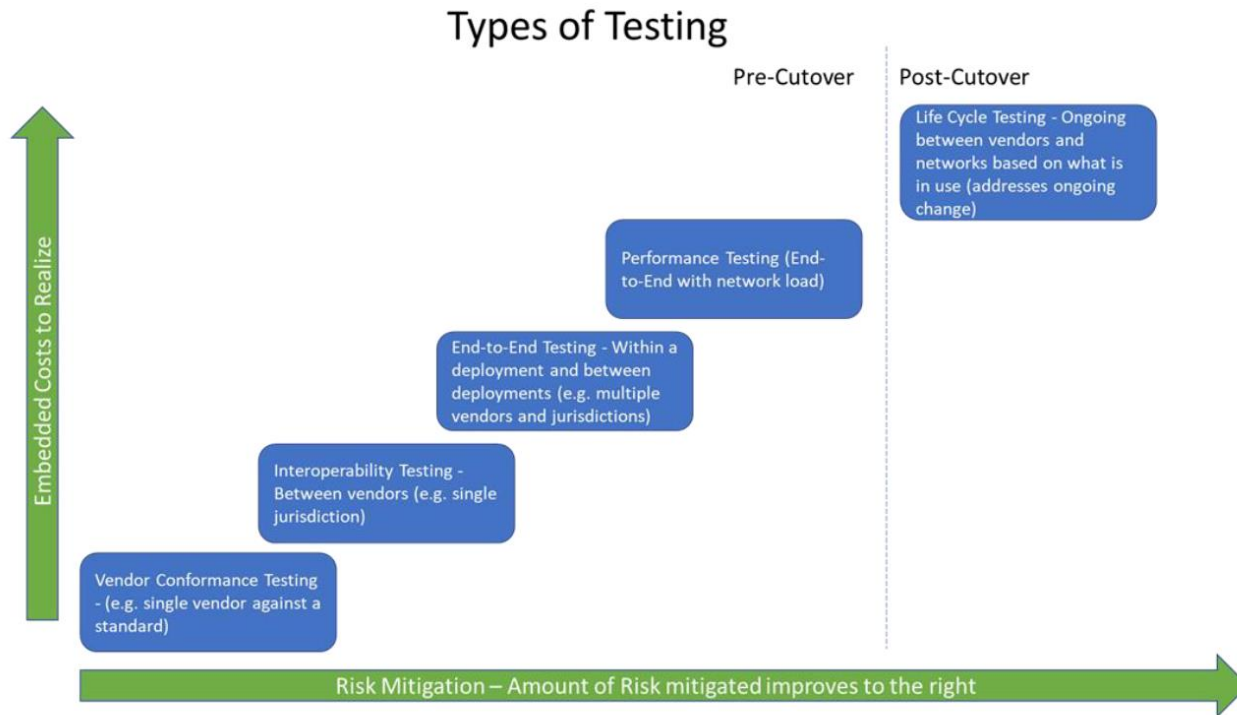
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What can be done?

- NG 9-1-1 Conversion
 - Enhanced capabilities such as ESRP
 - Can provision call center backup in remote area (Not call center limited because of IP, i.e. New Orleans ↔ Houston).
- Interoperability Testing –CIRI NG 9-1-1 Interoperability project
- Facilities resilience (redundancy)

Interoperability



Finding: Massive inoperability had the biggest effect on communications, limiting command and control, situational awareness, and federal, state, and local officials' ability to address unsubstantiated and inaccurate media reports

Massive inoperability was the biggest communications problem in the response to Katrina. By all accounts, destruction to regional communications companies' facilities and the power systems on which they depend was extraordinary. For example:



A downed communications tower, Plaquemines Parish, LA.

Facilities Resilience

- NENA recommends multiple Broadband services out of each PSAP.
- In Telecommunications we tend to measure in terms of Reliability i.e 99.999% uptime or 5 nines.
- A better measurement would be a resilience factor
 - What are shared resources due to carrier agreements?
 - IRUs
 - Carrier Resale Agreements
 - Is the fiber/copper/microwave shared?
 - Where do IP routes converge?
 - Could be difficult due to non-transparency by service providers.

Questions

