

A BIPARTISAN INITIATIVE

DEFENDING DIGITAL DEMOCRACY



HARVARD Kennedy School
BELFER CENTER
for Science and International Affairs
Defending Digital Democracy Project



NCSL Election Security Conference
26 April 2018

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Defending Digital Democracy Project

1

Convening leaders from tech sector, government, academia, and the media to develop best practices for basic risk mitigation steps and implementation

2

Helping those on the frontline—campaigns and election officials—understand the risks they face from cybersecurity and information operations

3

Providing practical “playbooks” to improve readiness

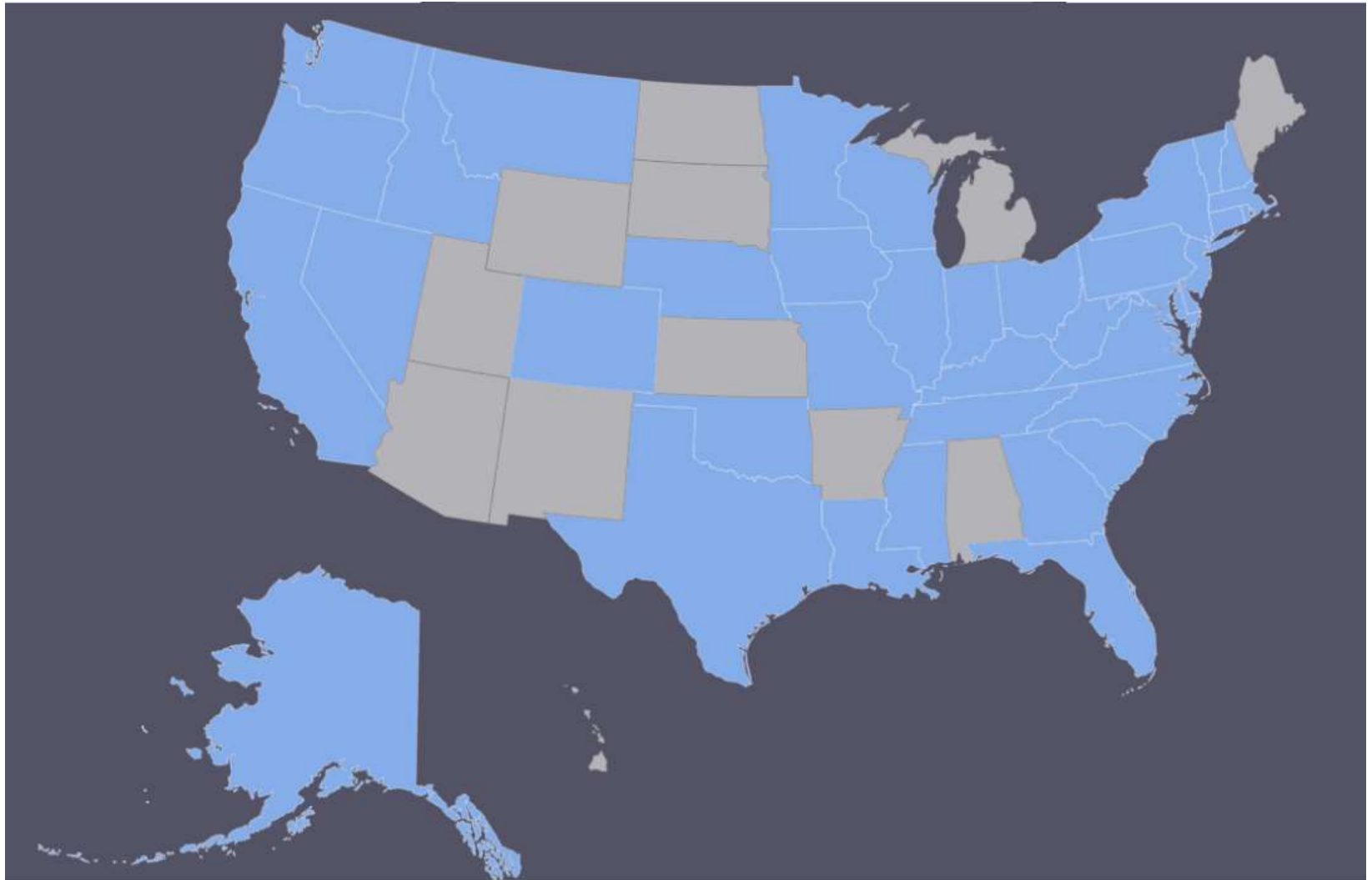
4

Emphasizing training and preparedness as fundamental to success—a plan is only as good as its execution

5

Empowering policymakers to better understand the issues so they can become more effective advocates

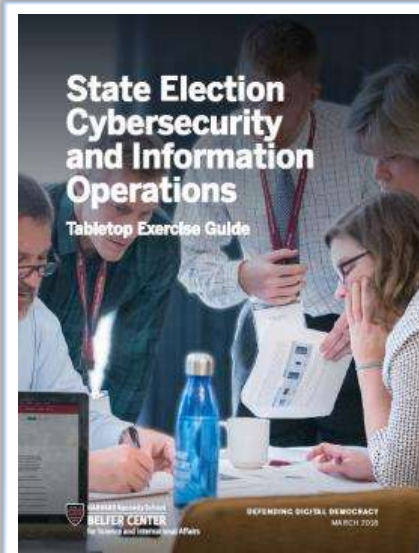
D3P Election Outreach



D3P Lines of Operation

Election Officials

Recommendations & Training



Election Officials & EIGCC

Communications Guides



Election Officials

Table-Top Exercises

SEP
2017

DEC
2017

MAR
2018

Campaigns



State and Local Election Cybersecurity Playbook



Your No-Fail Mission

Protect the integrity of the elections process and preserve the public's confidence in the system.

S&L Playbook Components

- **Playbook Approach**
- **Common Ground**
 - 10 Best Practices for All Election Jurisdictions
 - Research Insights by Election System
- **Technical Recommendations by System**
 - Voter Registration Databases
 - Vote Casting Devices
 - Vote Tallying Systems
 - Election Night Reporting
 - Internal and Public-Facing Communications
- **Appendices**
 - Vendor Selection and Maintenance
 - Election Audits
 - External Resources

Potential Malicious Actors

POSSIBLE ACTORS



Nation-State Actors



Criminals



Black Hat Hackers



Insiders



Terrorists



Politically Motivated Groups

POSSIBLE MOTIVATIONS



Financial Gain



Retribution for Perceived Grievances



Fame and Reputation



Sow Social Division



Foment Chaos / Anarchy



Subvert Political Opposition



Foreign Policy / National Interests

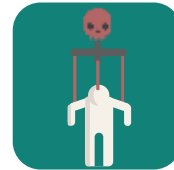


Undermine Trust in Democracy

Common Tactics: Cyber Operations



Hacking



Social Engineering



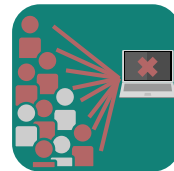
SQL Injection



Spear-Phishing



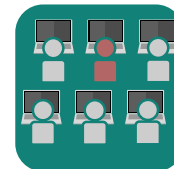
Port Scans



DDoS (Distributed Denial of Service)



Man-in-the-Middle



Insider Threat

Common Tactics: Information Operations



Information Operations (IO) includes propaganda, disinformation, and other tools used to manipulate public perception.



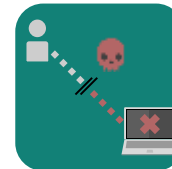
Leaking Stolen Information



Spreading False Information



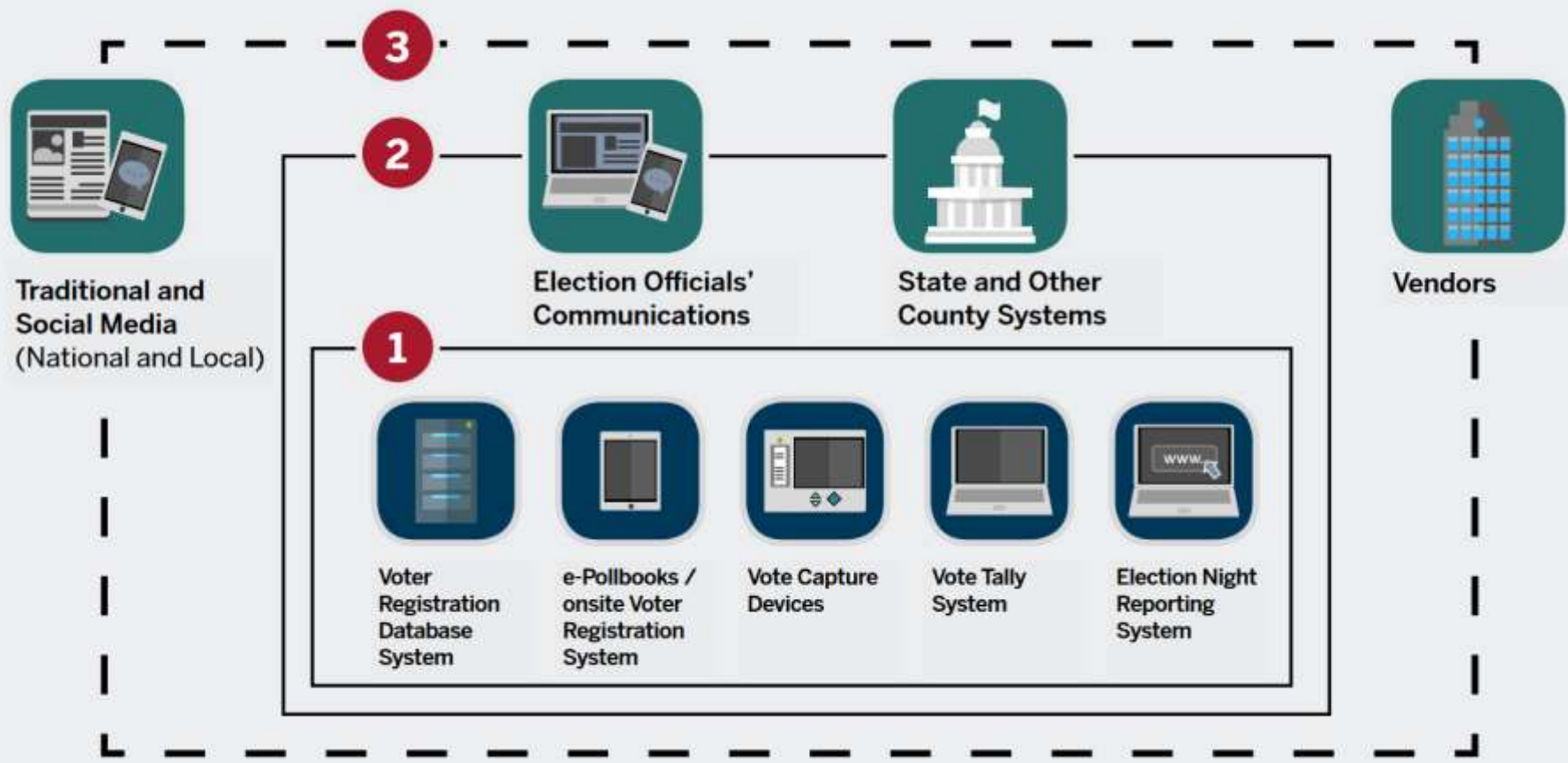
Amplifying Divisive Content



Manipulating Public Facing Communications

Elections as a System of Systems

ELECTION SYSTEM OVERVIEW: POTENTIAL ATTACK VECTORS



10 Best Practices for All Jurisdictions

- 1 Create a **proactive security culture**.
- 2 Treat elections as an **interconnected system**.
- 3 Have a **paper vote record**.
- 4 Use **audits to show transparency** and maintain trust in the elections process.
- 5 Implement **strong passwords** with **two-factor authentication**, and **change defaults**.

10 Best Practices for All Jurisdictions

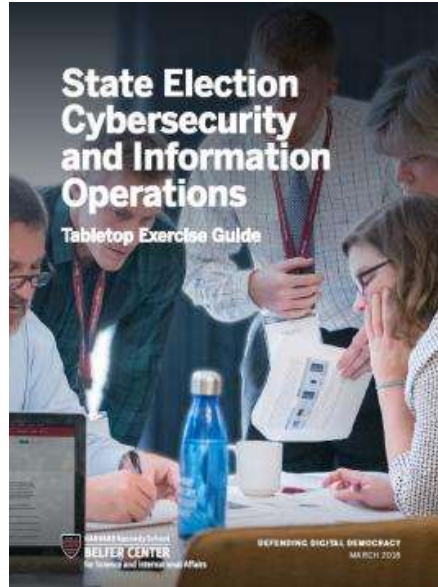
- 6 Control and actively **manage access**.
- 7 Prioritize and **isolate sensitive data** and **systems**.
- 8 Monitor, log, and **backup data**.
- 9 Require vendors to make **security a priority**.
- 10 **Build public trust** and **prepare for information operations**.

Where State Legislatures Can Make the Most Impact

- Implement 2FA
- Isolate sensitive data systems
- Implement audit logs and monitoring
- Have a paper trail
- Do vote audits
- TRAIN

National Conference March 26 & 27 2018

TTX Train the Trainer Event



**38 States & 120
Election Officials**

**Day 1: Threat Briefs,
TTX, and AAR**

**Day 2: How to Build
and Execute a TTX**





Defending Digital Democracy Project

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