RSAConference2015
San Francisco | April 20-24 | Moscone Center

SESSION ID: PNG-R04

States at Risk: Cyber Threat Sophistication, Inadequate Budget and Talent

MODERATOR:

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Thomas MacLellan
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National Governors Association, Center for Best Practices

Panel

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Srini Subramanian
State Sector Risk Advisory Leader, Deloitte & Touche LLP

Agenda

- Introduction
- The maturing role of the CISO
- Budget-strategy disconnect
- Cyber security complexity
- Talent crisis
- Q&A

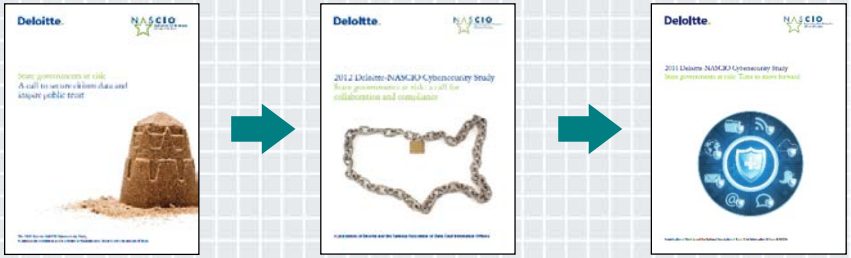
State governments are a target, citizen trust impact is top concern

States collect, share and use large volumes of the most comprehensive citizen information.

Makes states an attractive target for both organized cyber criminals and hactivists.

Cybersecurity needs to be a governor and a business executive level issue.

The 2014 Deloitte-NASCIO Cybersecurity Study



2010 2012 2014

Third biennial study

The study is based on surveys and comparisons, and offers suggestions to:

- Provide state leadership with insights and identify trends to help states set informed and strategic cybersecurity direction
- Assess elected and appointed business leader input with a state officials survey
- Compare responses from CISOs and state officials, along with relevant results from the 2010 and 2012 studies

An outstanding response and result

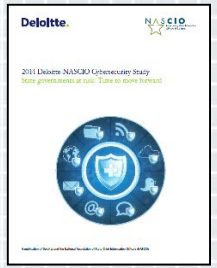
State CISO Survey: 49 state CISOs responded to an online survey containing 58 questions

State Officials Survey: 186 elected and appointed officials from 14 affiliated organizations answered 14 questions:

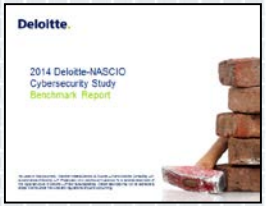
1. National Association of State Auditors, Controllers & Treasurers (NASACT)
2. National Association of Attorneys General (NAAG)
3. National Association of Secretaries of State (NASS)
4. National Association of State Personnel Executives (NASPE)
5. National Association of State Chief Administrators (NASCA)
6. National Association of State Budget Officers (NASBO)
7. National Association of State Procurement Officials (NASPO)
8. American Association of Motor Vehicle Administrators (AAMVA)
9. National Association of Medicaid Directors (NAMD)
10. National Emergency Management Association (NEMA)
11. Adjutant General Association of the United States (AGAUS)
12. Governors Homeland Security Advisors Council (GHSAC)
13. Federation of Tax Administrators (FTA)
14. International Association of Chiefs of Police (IACP) – Division of State & Provincial Police (S&P)

Results

1. Cybersecurity Study



2. Benchmark Report



Findings from the study

Key themes from the study

- Maturing role of the CISO
- Budget-strategy disconnect
- Cyber complexity challenge
- Talent crisis

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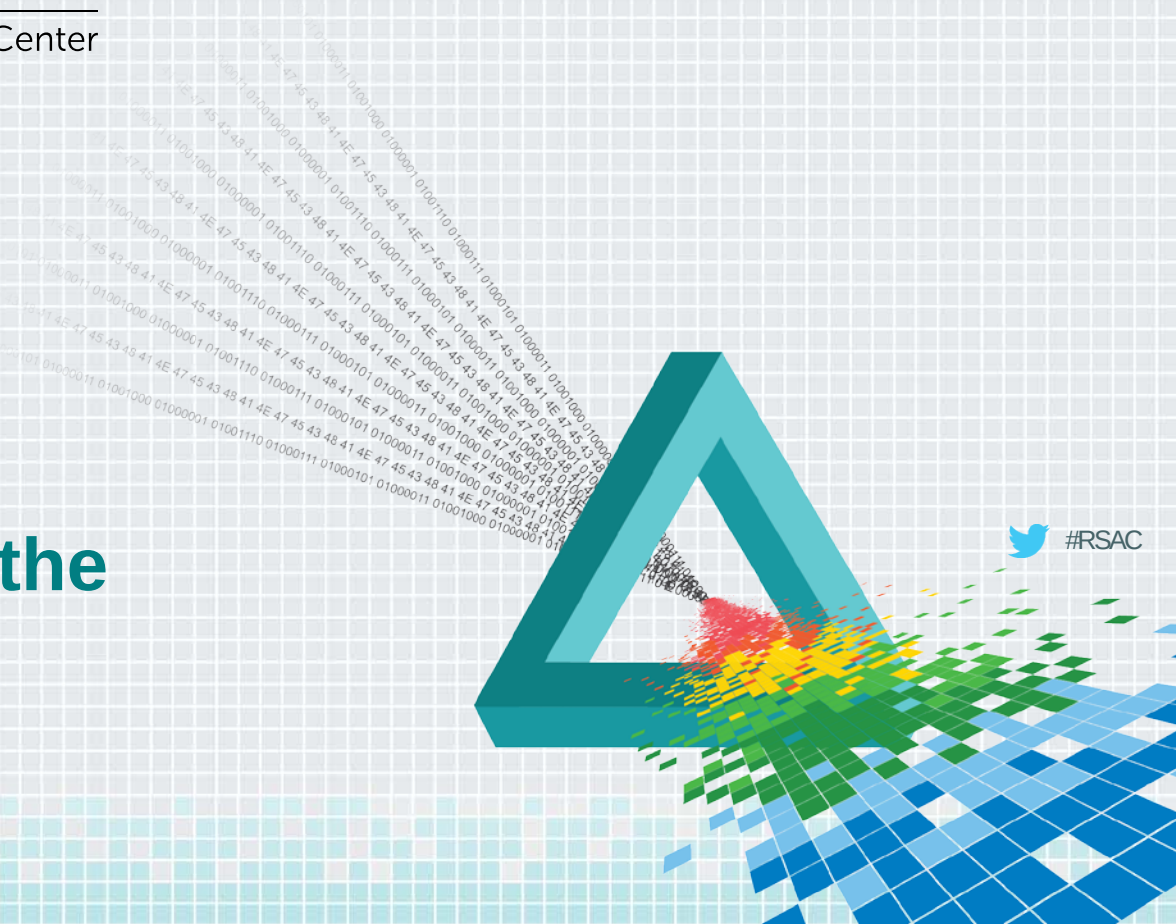

I. Maturing role of the CISO

Maturing role of the CISO

The CISO role is gaining legitimacy

98.0%
Of states have a CISO

89.8%
CISOs report to CIOs

49.0%
CISO authority established by statue or law

55.1%
CISO authority established by secretary or CIO

2014 Deloitte-NASCIO Cybersecurity Study

Maturing role of the CISO

39.6%
Governors

Communication to business leaders is mostly ad hoc

25.0%
Secretary/
deputy secretary

40.4%
State legislature

98.0%
Of states have a CISO

49.0%
CISO authority established by statue or law

55.1%
CISO authority established by secretary or CIO

89.8%
CISO report to CIO

43.8%
Business stakeholders

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Maturing role of the CISO

Top CISO function have standardized

100%
Awareness and training

100%
Strategy and planning

95.9%
Risk assessment and management

98.0%
Incident management

98.0%
Governance (architecture, policies, and standards)

98.0%
Of states have a CISO

89.8%
CISO report to CIO

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CISO authority established by statue or law

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2014 Deloitte-NASCIO Cybersecurity Study

Moving forward…

Role and governance

- **Governance, Risk and Compliance:**
  CISOs could continue to manage the strategic, risk management, and regulatory/compliance functions
- **Privacy:**
  Enterprise-level privacy officers can help determine which data needs to be protected and why
- **Security technology and operations**:
  A security executive could manage technical and operational aspects of security

II. Budget-strategy disconnect

Budget-strategy disconnect

Cybersecurity budgets are increasing year over year

Percentage of CISO respondents

2012 2014

Additional funding sources are helping with the increase

47.9%

U.S. Department of Homeland Security

32.7%

Business/program stakeholders

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Budget-strategy disconnect

Funding is still the #1 barrier to effective cybersecurity

Lack of sufficient funding

Security allocation as part of IT budget remains unchanged

46.8% of states have only 1-2% of IT budget for cybersecurity

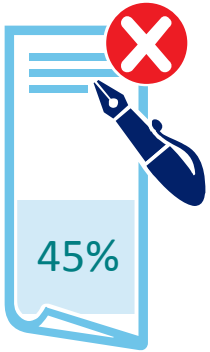
Senior Executive commitment is there, but funding still insufficient

65.3%

2014 Deloitte-NASCIO Cybersecurity Study

Budget-strategy disconnect

Approved strategies are still largely missing



Absence of approved strategy

Absence of business-aligned metrics

47.9%

Majority of CISOs continue to work on establishing business-aligned metrics

2014 Deloitte-NASCIO Cybersecurity Study

Moving forward…

Strategize & achieve appropriate funding

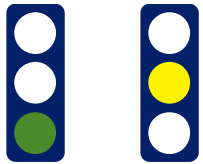
- Communicate and collaborate with legislators and state business/program leadership to build a business case for security as a line item in the budget
- Effectively collaborate with agency-level program and business leaders to get cybersecurity included in program budgets
- Work with CIOs to:
  - Allocate a reasonable percentage of new business and technology initiatives for cybersecurity
  - Identify creative ways to include cybersecurity as a critical part of enterprise data center consolidation initiatives

III. Cyber complexity challenge

Cyber complexity challenge

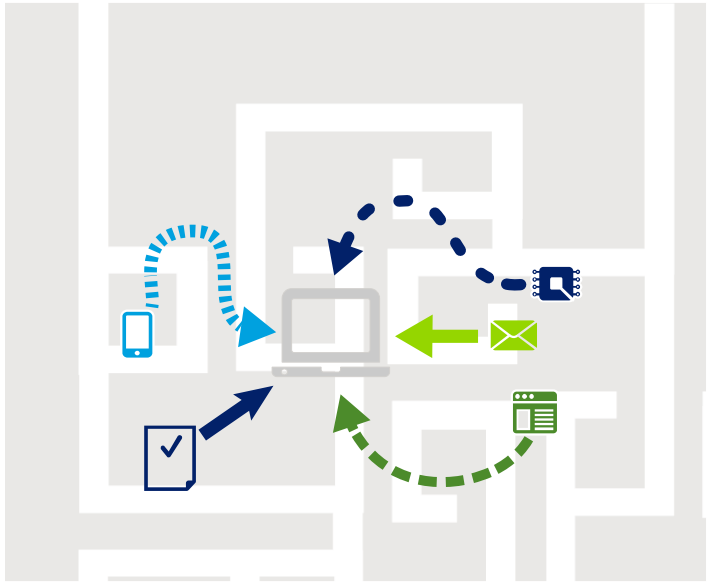
Confidence Gap

Ability to protect against external attacks;
Only 24% CISOs vs. 60% State officials



State officials

CISOs



Top barriers

State officials and CISOs agree

#1 Funding

#2 Sophistication of threats

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Moving forward…

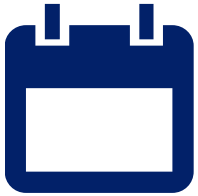
Unravel the complexity

- Use both increasing regulatory requirements and audit findings to gain the attention of business and agency/program leaders
- Clearly communicate the nature and severity of cyber risks and impacts to business stakeholders, agency/program leaders and legislative leaders
- State cybersecurity approach needs to evolve – can't rely on protection or securing efforts alone

IV. Talent crisis

Talent crisis

FTE counts are increasing



49% 6 to 15 FTEs

Competencies have increased, training has improved

7 out of 10 states agree

Inadequate availability of cybersecurity professionals

Barrier #3 59%

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Talent crisis

Top challenge is staffing

Salary
9 out of 10 CISOs

Collaboration needed with HR to define cybersecurity career path

25%

States with appropriate job descriptions documented by HR

Leading challenge in workforce development

67.3%

CISOs choose "Lack of a defined cybersecurity career path"

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Talent crisis

Top three actions to improve workforce

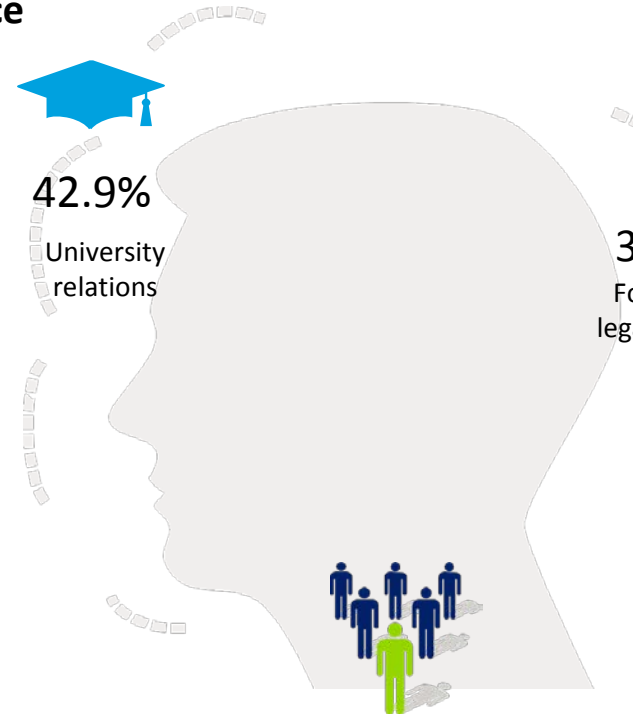
57.1%
Non-salary benefit

46.9%
Cross-train IT workforce

42.9%
University relations

NICE framework

35.4%
CISOs are reviewing



Top functions outsourced

38.8%
Forensics/ legal support

36.7%
Threat risk assessments

36.7%
Threat management and monitoring services

2014 Deloitte-NASCIO Cybersecurity Study

Moving forward…

Get creative & gain on talent

- Attracting Millennials is a whole new ballgame: Millennial are likely to be an important source of talent in the cybersecurity arena
- Partner with Human Resources: States need a career development path for cybersecurity talent
- Partner with private sector to supplement cybersecurity teams: CISOs should provide training to their staff to effectively manage teams that may include members from third parties

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Questions & answers