



MIT (IC)³ Creating a Culture of Cybersecurity

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200,000

Security events

“The average company handles a bombardment of **200,000 security events** a day”

89% of companies say they have been the victim of a cyber attack in the last 12 months. **1 in 3** say they have been hacked more than 5 times in the past year.

2

Source: Harvard Business Review, “Cybersecurity has a serious talent shortage and here’s how to fix it”, Posted online May 4, 2017

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20
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cyber
have b
- Professor Stuart Madnick
ty events
Those that know they have been attacked, and
Those that don't YET know that they have been attacked."
- Professor Stuart Madnick

3

Source: Harvard Business Review, "Cybersecurity has a secret weapon"

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71%

The percent of attacks caused by insiders
(**inadvertent actors**, and **malicious insiders** in the
health care industry) in 2016

Source: IBM X-Force Threat Intelligence Index 2017, (<https://public.dhe.ibm.com/common/ssi/ecm/wg/en/wal03140usen/WGL03140USEN.PDF>)

4

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Cybersecurity at MIT Sloan (formerly IC)³ at MIT Sloan School of Management



We are a Consortium dedicated to studying the difficult questions about the **organizational, managerial, and strategic** aspects of cybersecurity. We do **research, teach, and hold events** to share our findings and build community. We were founded by Professor Stuart Madnick and Dr. Michael Siegel in 2015.

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5

<p>MIT MANAGEMENT SLOAN SCHOOL</p> <p>INTERDISCIPLINARY CONSORTIUM IMPROVING CRITICAL INFRASTRUCTURE CYBERSECURITY (IC)³</p>	<p>Partners</p>	<p>Members</p>	<p>Collaborations</p>
<p>FOUNDERS <i>(Founders are those who joined during (IC)³'s first year)</i></p>	<p>Partners</p>		
<p>Members</p>			

(IC)³ Research Framework



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(IC)³ Research: Organizational Cybersecurity Culture



Research Question:

How can we create and improve a culture of cybersecurity in our organizations?

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Audience Participation



Has your organization specifically designed a culture of cybersecurity?

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9

Audience Participation



Zoom Poll: Please click Yes or No:
Has your organization specifically designed a culture of cybersecurity?

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10

Defining Cybersecurity Culture



- Culture: The **Attitudes, Beliefs, and Values** (unwritten rules) that drive **Behaviors** in an organization
- Cybersecurity Culture: the attitudes, beliefs and values that drive behaviors to create cybersecurity in an organization

Objectives of this work:

- Summarize and categorize best practices that change or drive behavior to increase cybersecurity in an organization
- Create a measurement model to measure cybersecurity culture
- Create a Cybersecurity Culture Maturity Model

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11

11

Audience Participation



How would your average employee answer this question: How involved in cybersecurity are your top senior leaders?

1. Very Involved
2. Somewhat Involved
3. Involved
4. Seldom Involved
5. Not Involved

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12

Audience Participation



Zoom Poll: Please click 1,2,3,4 or 5

Audience Participation



How would your average employee answer this question: How involved in cybersecurity are your top senior leaders?

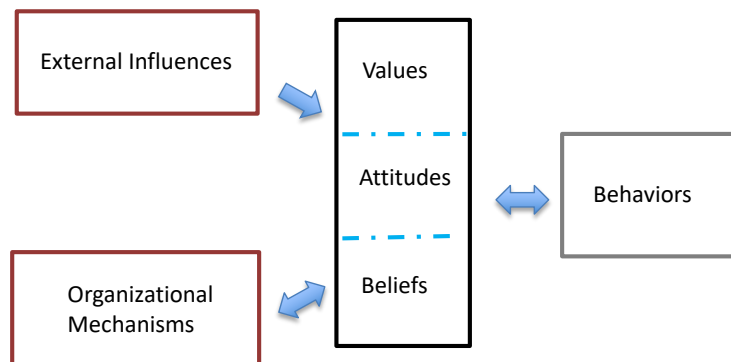
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12

13

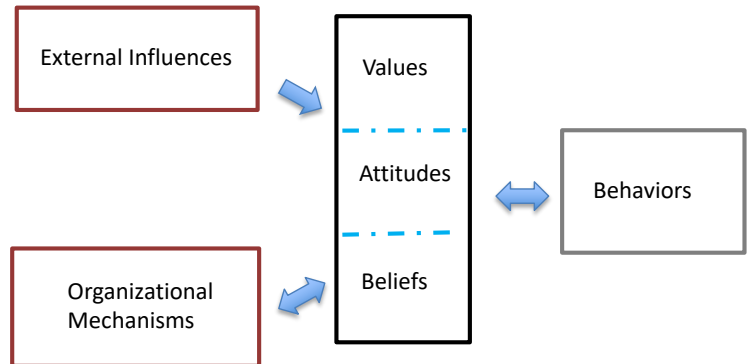
Cybersecurity Culture Model



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14

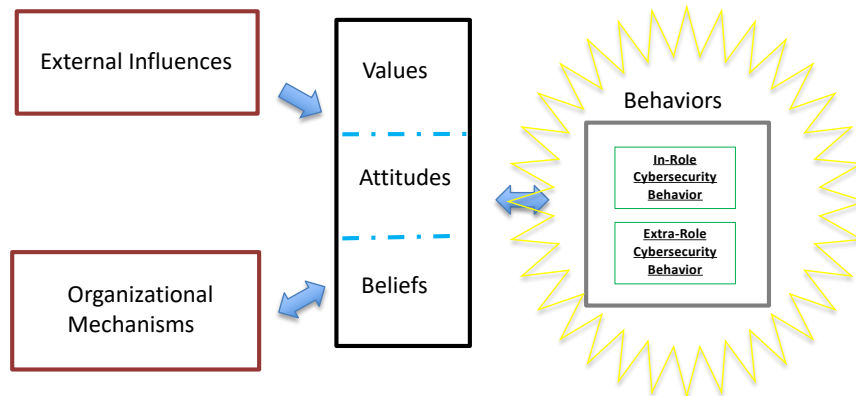
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15

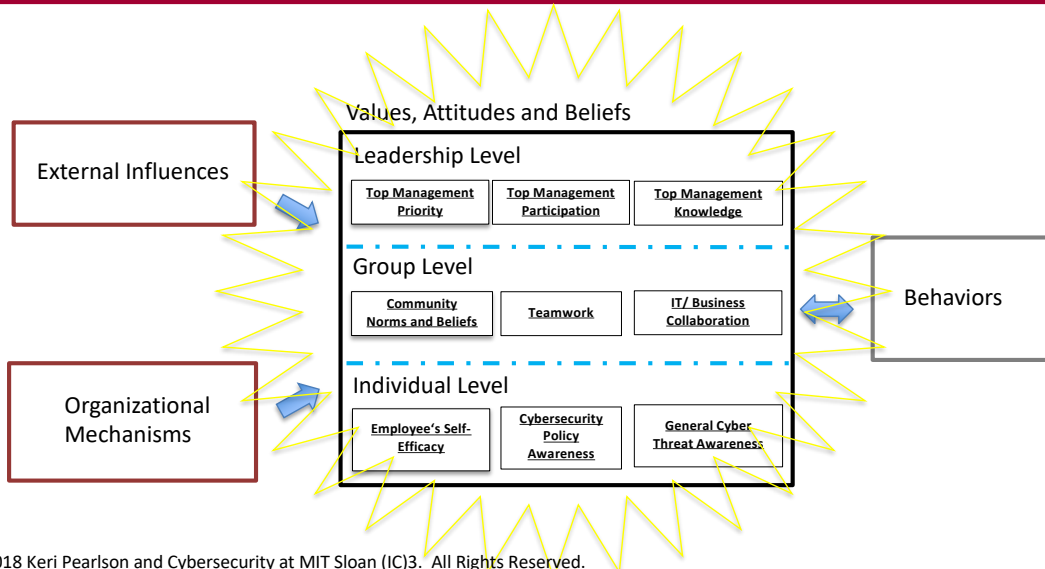
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16

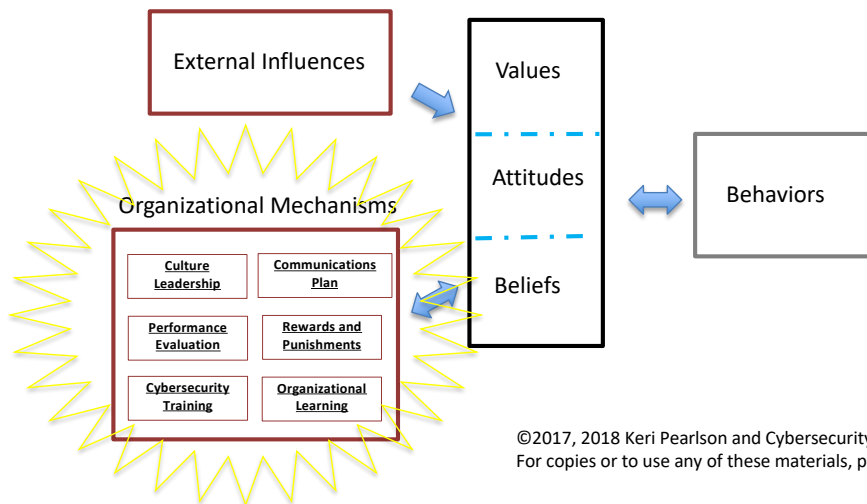
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17

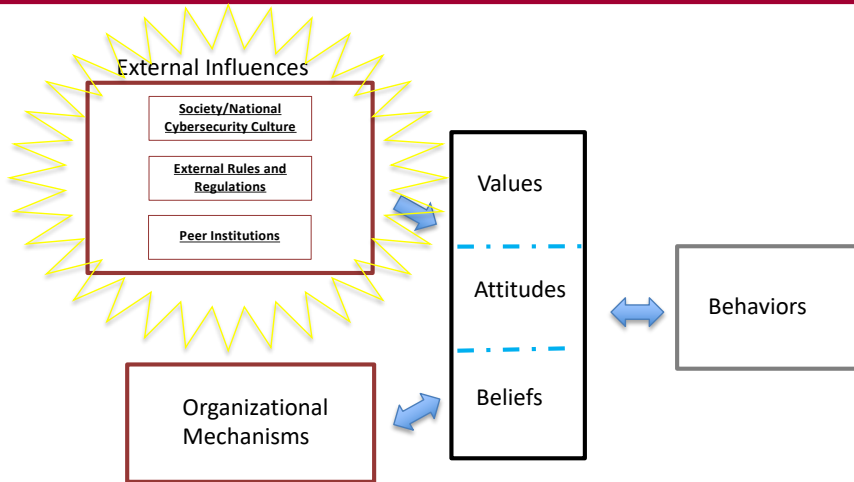
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18

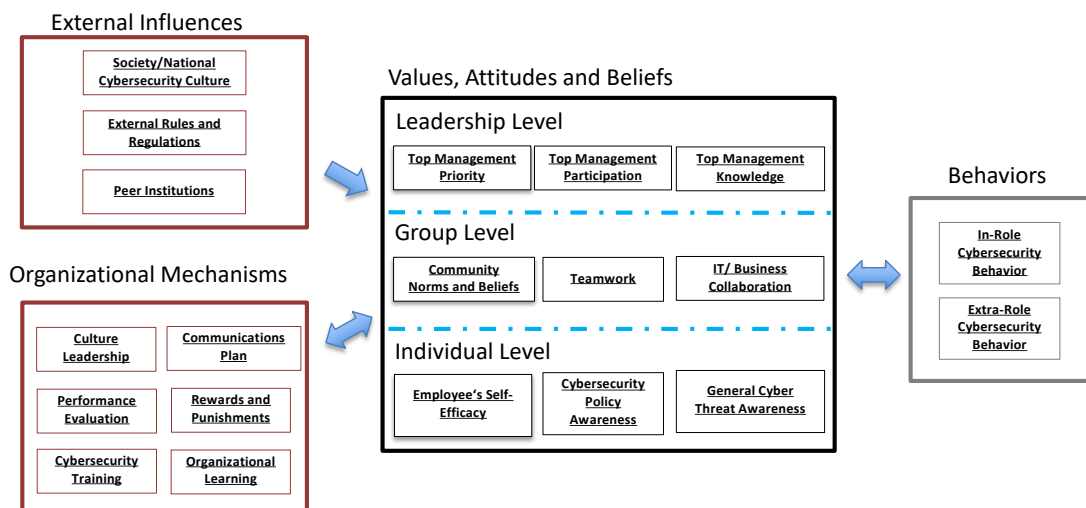
Cybersecurity Culture Model



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19

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20

Audience Participation



What is the prevailing thought in your organization about who is responsible for cybersecurity?

- A. Our technology and systems have security features that provide our cybersecurity
- B. Our CISO/CIO's team takes care of our cybersecurity needs
- C. Our business managers/leaders are responsible for cybersecurity
- D. I (employees) personally am responsible for our cybersecurity

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21

Audience Participation ZOOM POLL



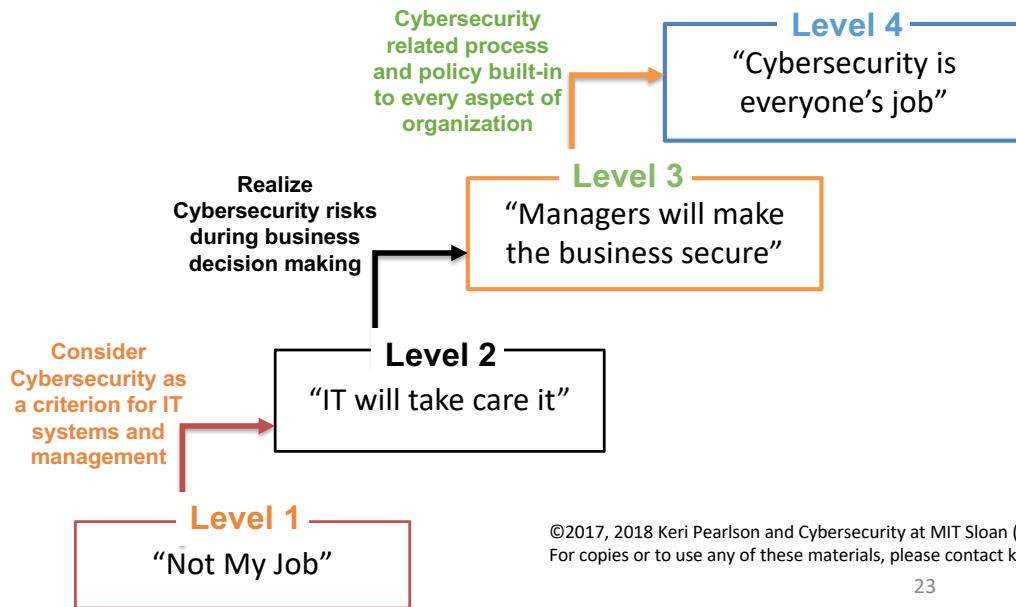
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22

Cybersecurity Culture: A Maturity Model



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(IC)³ WRAP UP

(IC)³ Research: Actionable Insights From This Project



1. Identify values, attitudes and beliefs you want to cultivate to drive cyber secure behaviors
2. Put someone in charge of building the cybersecurity culture
3. Use marketing campaigns to clearly communicate corporate values and beliefs you want cultivated in your organization. Make it fun and engaging.
4. Educate, Educate, Educate: Once a year compliance training is not enough.
5. Engage/challenge the whole organization to find ways to become more cyber secure.
6. Create your roadmap to increase maturity

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25

Call to Action: How Can You Get Involved?



Join Us

(we are primarily funded by consortium memberships)

Fund Us

(We conduct directed research projects and greatly appreciate donations)

Participate with Us

(From time to time, we seek out participants and research sites for our projects)

(More info available at: <https://ic3.mit.edu> or contact me at: kerip@mit.edu)



Help us
validate
our model

<https://www.surveymonkey.com/r/ic3culture>

26