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Evolving Role of the Chief Risk Officer

by Summer Fowler, Brian Schwartz, and Greg Porter
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DM-000170134
Business

Risk → Management

Operation → Marketing

Financial
CYBER RISK
CRO Drives a Comprehensive Risk Management Framework

Strategy, Governance, Culture

Risk Management Processes
- Business objectives
- Risk identification
- Risk assessment
- Risk management
- Control and validation
- Risk reporting

Risk Analytics, Infrastructure and Resources
- Risk inventory
- Risk measures
- Integration
- Capital measures
- Performance measures
- Control indicators

Technology
Resources
## Risk Management - Roles and Responsibilities

### Clarity of Roles and Responsibilities Structured into “Three Lines of Defense”

<table>
<thead>
<tr>
<th>Responsibilities:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st</strong></td>
</tr>
<tr>
<td>• Identify key risks</td>
</tr>
<tr>
<td>• Assess key risks</td>
</tr>
<tr>
<td>• Manage and monitor controls</td>
</tr>
<tr>
<td><strong>2nd</strong></td>
</tr>
<tr>
<td>• Develop risk management framework</td>
</tr>
<tr>
<td>• Test and monitor front line activities</td>
</tr>
<tr>
<td>• Effectively challenge front line</td>
</tr>
<tr>
<td><strong>3rd</strong></td>
</tr>
<tr>
<td>• Objectively test controls</td>
</tr>
<tr>
<td>• Assess first line risk activities</td>
</tr>
<tr>
<td>• Assess second line risk activities</td>
</tr>
</tbody>
</table>
Risk Management & The Board

• Business leaders may see cybersecurity as an abstraction— something handled by others in the organization.

• However, cybersecurity today is a **core business imperative**; a data breach or loss of critical assets could have debilitating consequences.

• An **IT failure**, let alone the loss of regulatory data sets such as personally identifiable information (PII), protected health information (PHI), or nonpublic information (NPI), is a risk management failure and can have a swift and negative business impact.

• The board is usually given the power to direct, manage, and represent the corporation.

• Directors and boards must understand and approach cybersecurity as an **enterprise-wide risk management issue**, not simply one relegated to IT alone.
Agency heads will be held accountable by the President for implementing risk management measures commensurate with the risk and magnitude of the harm that would result from unauthorized access, use, disclosure, disruption, modification, or destruction of IT and data.

They will also be held accountable for ensuring that cybersecurity risk management processes are aligned with strategic, operational, and budgetary planning processes.

Each agency head shall use The Framework for Improving Critical Infrastructure Cybersecurity (the Framework) developed by the National Institute of Standards and Technology, or any successor document, to manage the agency's cybersecurity risk.
Adversarial Attack Model & Risk

- MITRE’s “Adversarial Tactics, Techniques, and Common Knowledge (ATT&CK)” is a framework for describing the actions an adversary may take while operating within an enterprise network.
  - Details the tactics, techniques, and procedures (TTP’s) adversaries use to execute their objectives while operating inside a network.
- If the adversary is using best practice for exploitation, is your organization using best practice for network defense?

In February 2016, California Attorney General Kamala Harris recommended that "the 20 controls in the Center for Internet Security's Critical Security Controls identify a minimum level of information security that all organizations that collect or maintain personal information should meet. The failure to implement all the controls that apply to an organization's environment constitutes a lack of reasonable security."

Source: [https://oag.ca.gov/breachreport2016](https://oag.ca.gov/breachreport2016)
The Chief Risk Officer (CRO) Certificate Program provides domain leaders with the latest skills and best practices in risk management. This five-month program focuses on what CROs need to know to flourish in their current positions and further develop their risk management careers, including strategies for effectively communicating risks to executive leadership professionals, and tools for analyzing and addressing enterprise risks.

The CRO Certificate Program is developed and delivered by Carnegie Mellon University’s Heinz College of Policy & Information Systems and the CERT Division of the Software Engineering Institute (SEI).

The CRO Certificate Program offers several unique advantages:

- **Balance of On-Campus and Distance Education:** The program consists of nine modules: four at our Pittsburgh campus (requiring three on-site trips) and five via synchronous distance technology.
- **Convenient Schedule Designed for Full-Time Professionals:** All virtual modules are held from 4-8 p.m. EST.
CRO Program Modules

- Role of the CRO
- Building a Risk Program
- Coordination and Collaboration Among Lines of Defense
- Risk Assessment and Measurement
- CRO Role in Cybersecurity Oversight
- Business Execution
- Risk Tools and Techniques
- Leadership & Team Building
- Risk as a Competitive Advantage
Fall 2017 Program Dates

Orientation & Modules (CMU Campus):
Sept. 20 – 22, 2017

Virtual Modules:
4:00 - 9:00pm EST
October 10, 17, 24

Group Project Work Session & Modules (CMU Campus):
Nov. 13-15

Virtual Modules:
4:00 - 9:00pm EST
Dec. 5, 12

Practicum Presentations (CMU Campus):
January 10-12, 2018
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