Integrating web application security control in the system development lifecycle

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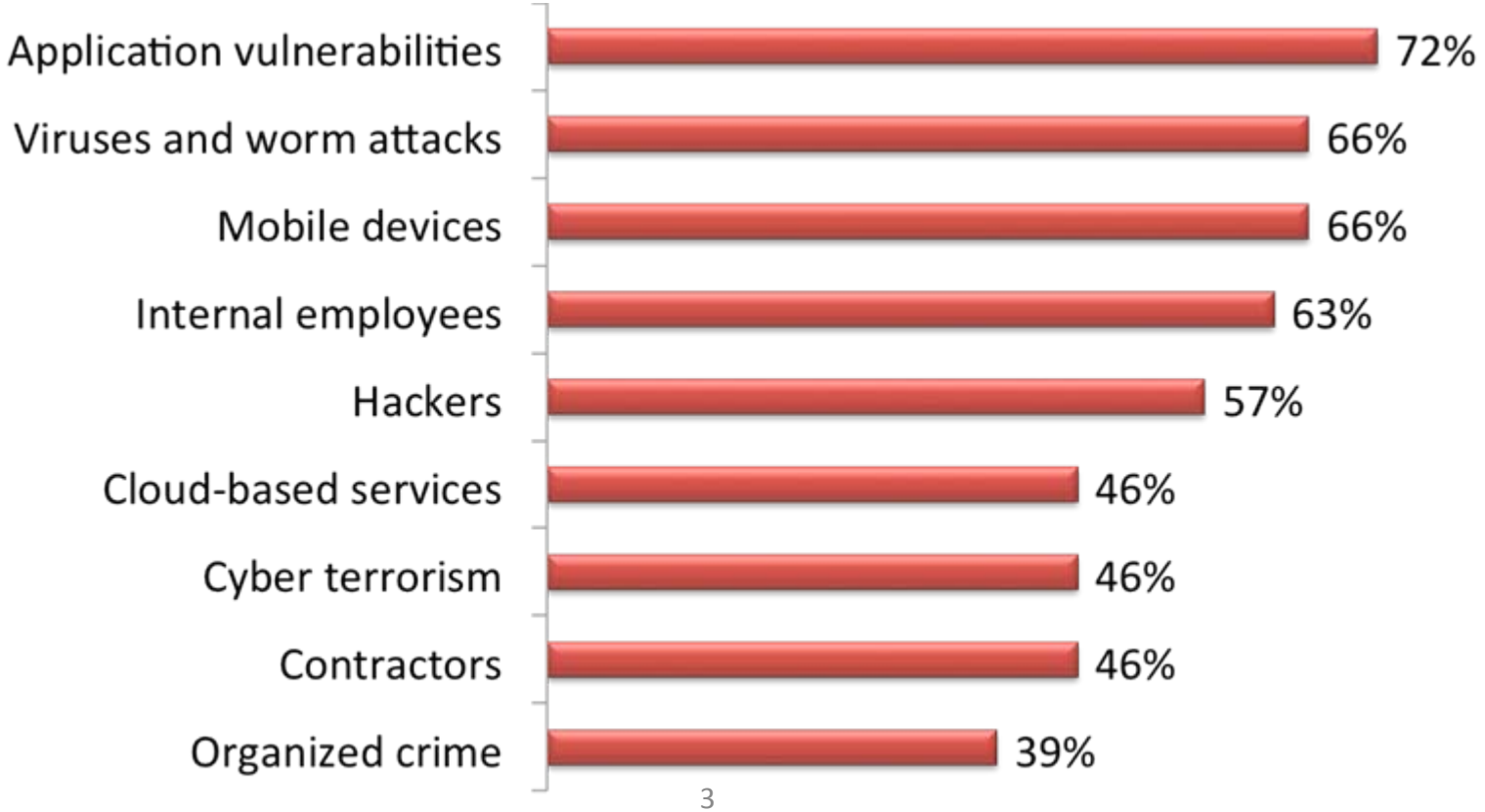
What are the Challenges

- Application security often receives much lower priority than it should in security planning
- Developers are under pressure from budget and time constrains
- Many of the application systems containing sensitive personal information, credit card data, and other sensitive corporate data are not thoroughly tested for data leakage and

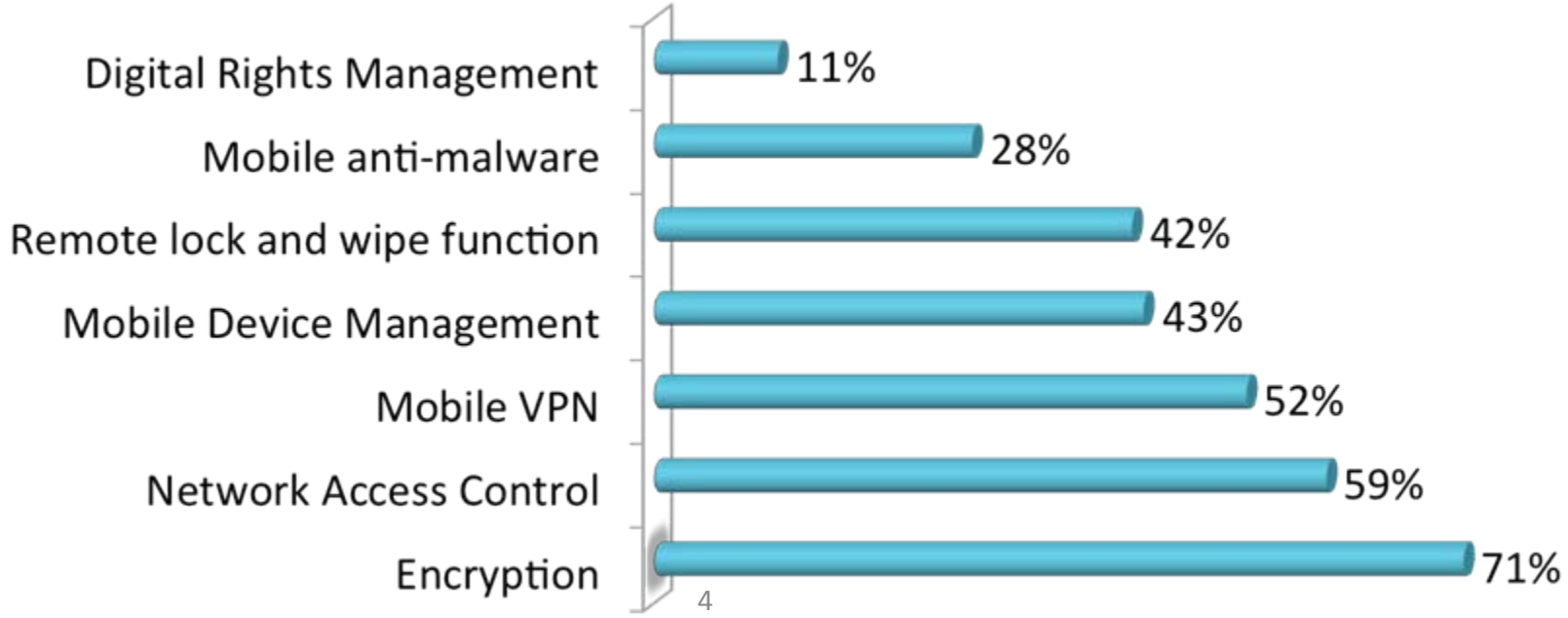
What We Learned – Top Threats

We need a paradigm shift in how security is considered across the enterprise to address the top security threats.



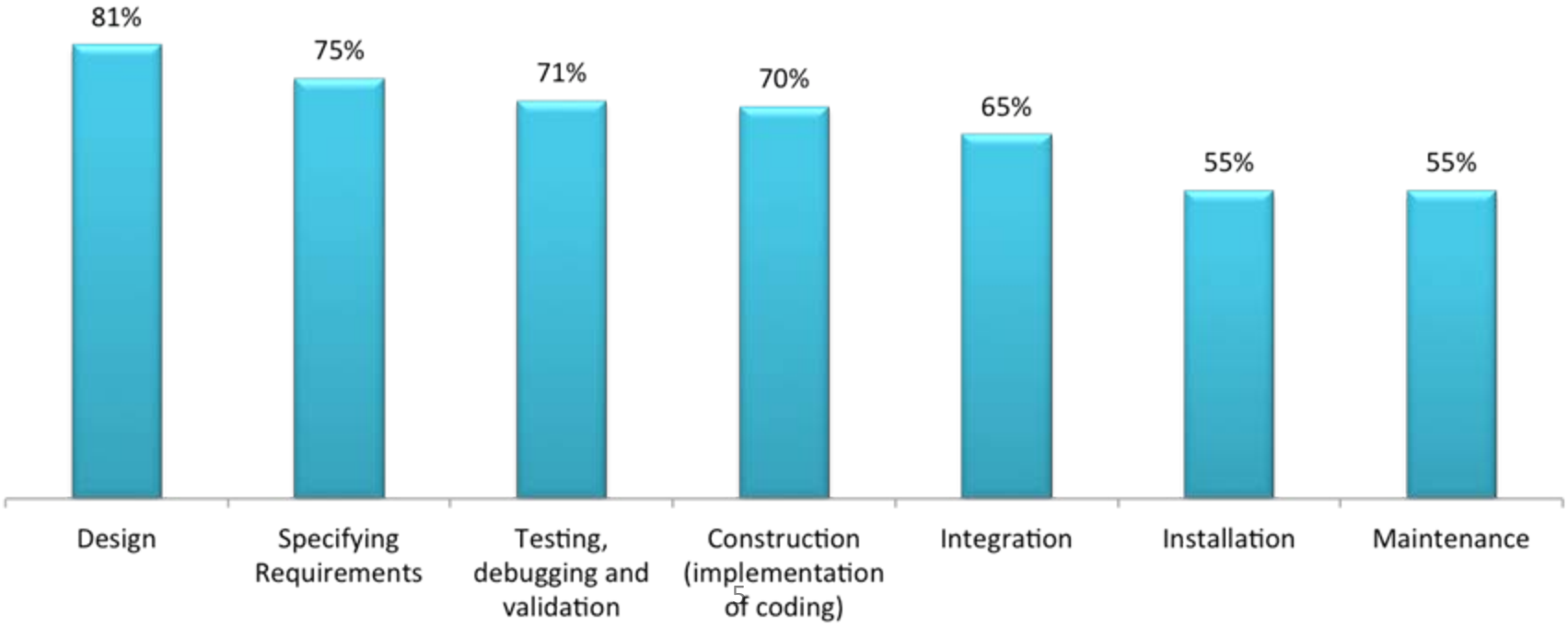
Changing Landscape - Mobile Devices

- 68% of respondents said Mobile computing devices are a significant risk to organizations.
- 69% have a formal policy in place to mitigate risks and use several solutions.



Changing Landscape - Application Vulnerabilities

73% of respondents identified application vulnerabilities as the top threat and have the following security concerns:



The Changing Landscape of Security

- Over 70% of security vulnerabilities exist at the application layer*
- Perimeter protection no longer sufficient – data compromise is the issue
- More incidents of data loss could result in greater government oversight and regulation
- 2008 (ISC)² Global Information Security Workforce Study report found significant costs result from data breaches
  - US $50 to $200 per record lost (not including reputation damage and loss of trust)

*Gartner Group, 2005

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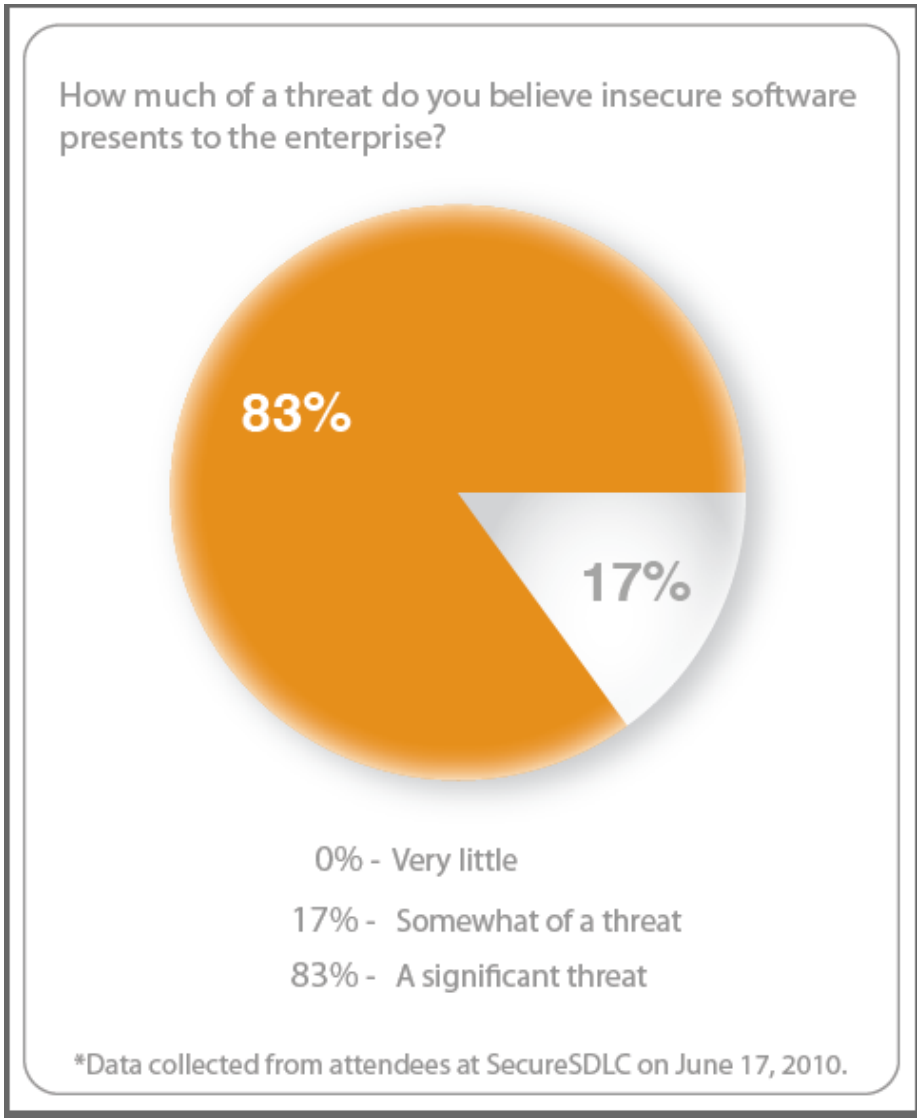
The Changing Landscape of Security



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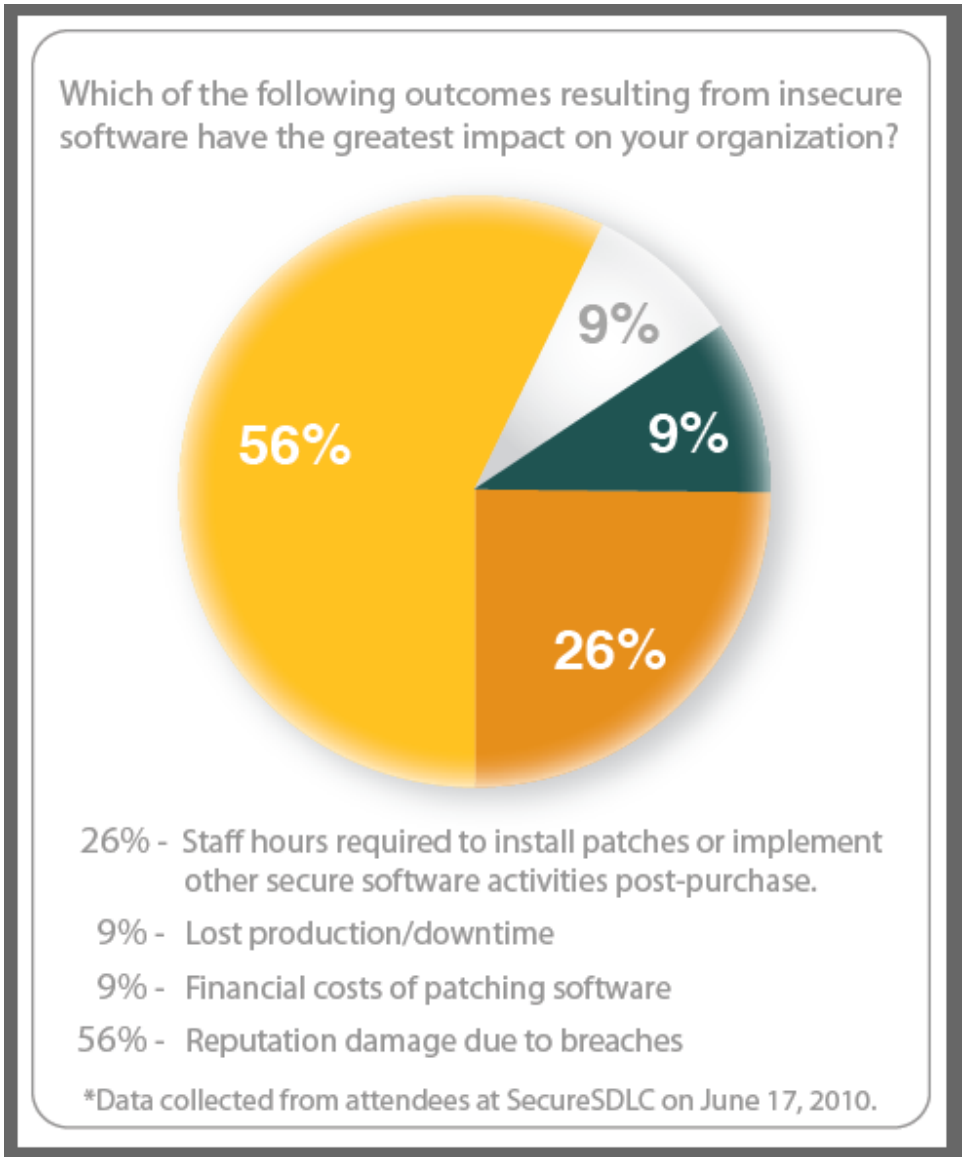
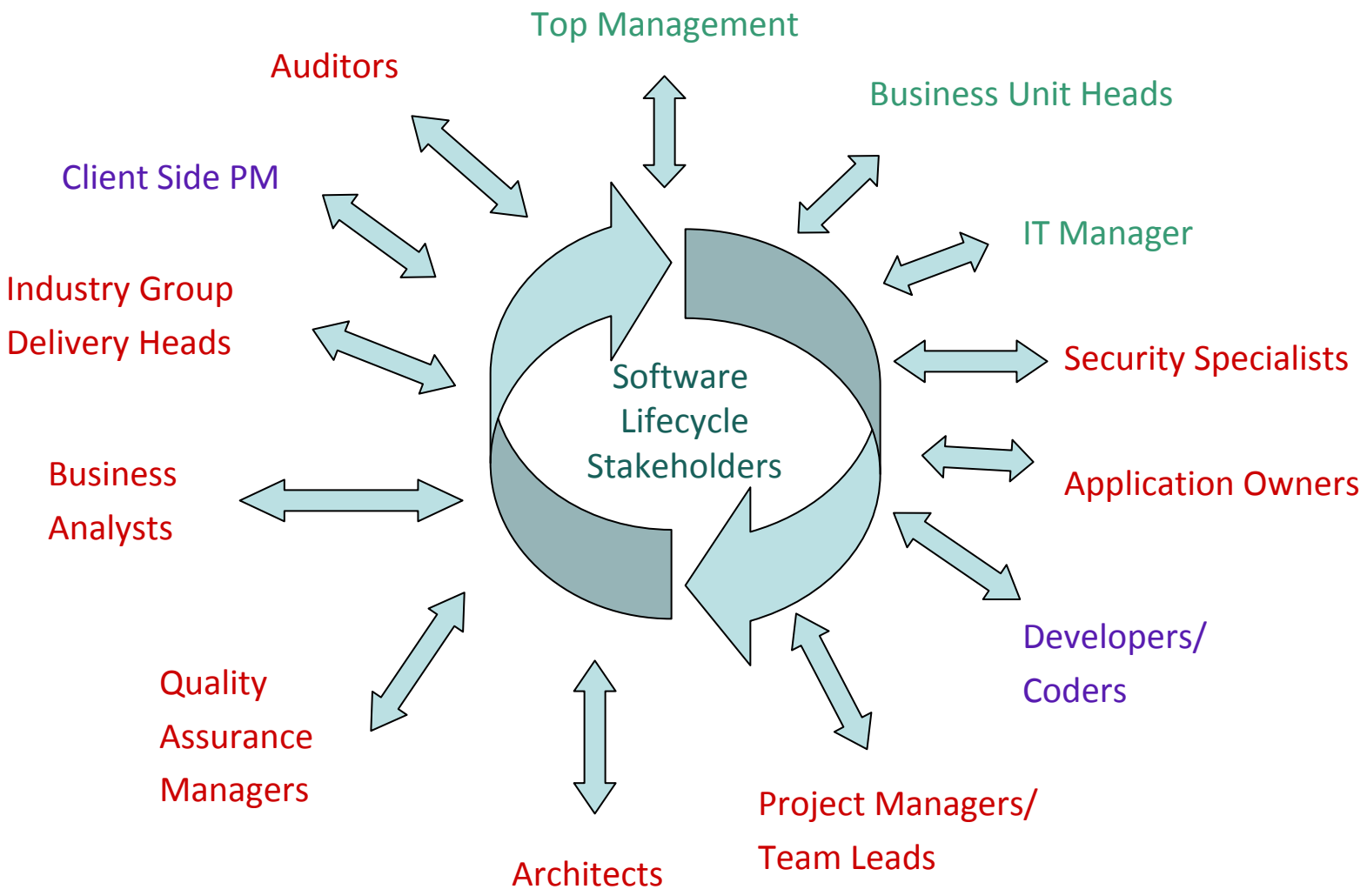
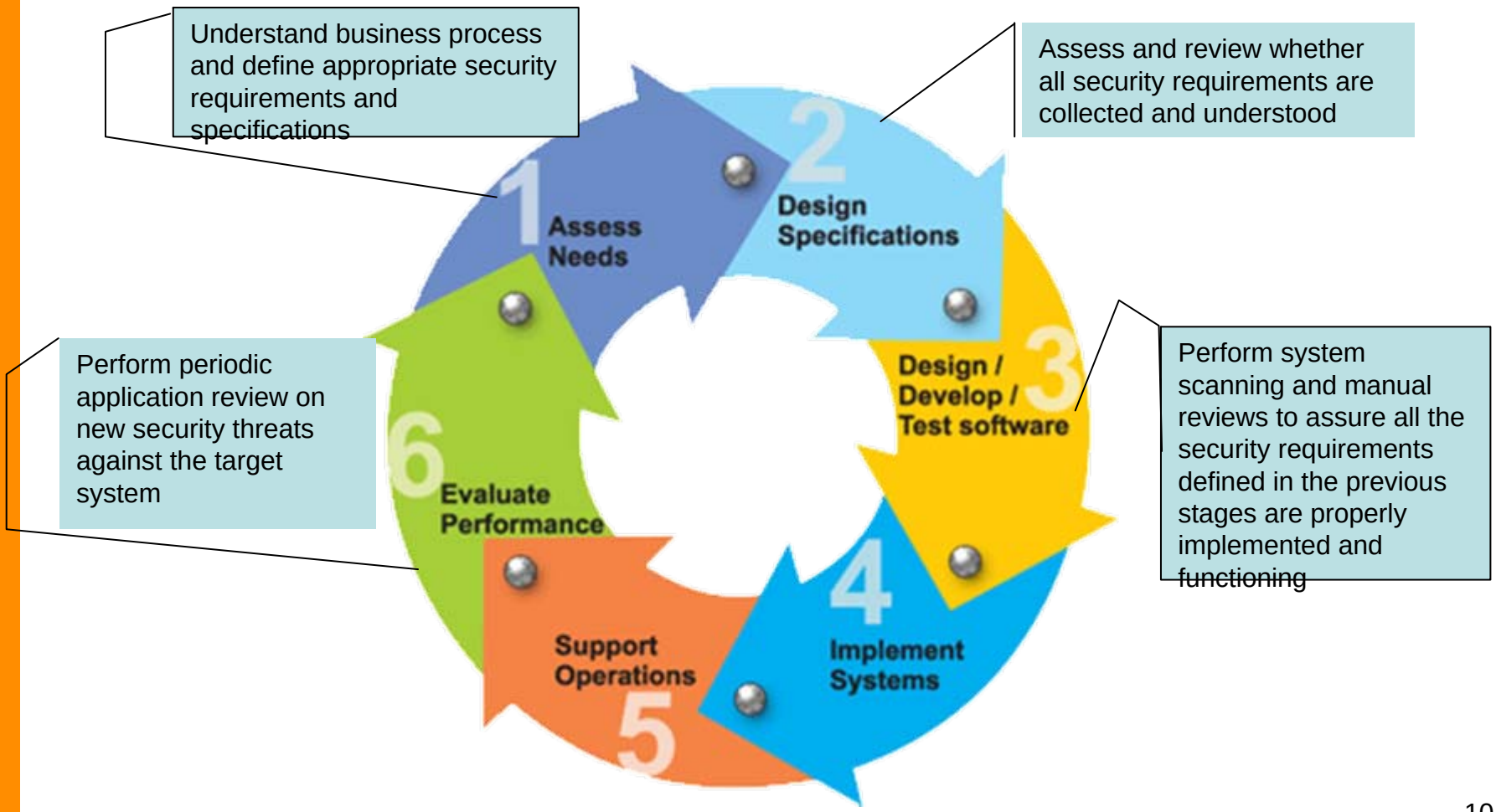
The Changing Landscape of Security



Software Lifecycle Stakeholder Chart



Perform Security Assessment and Audit during the SDLC



Objectives Achieved

- Avoid security requirement being missing in the design and as a result, not being built into the application
- Identifies application security issues before they are exploited
- Verify applications are properly configured and implemented to prevent sensitive or unnecessary information from being revealed
- Review application code for programming errors
- Validate user authentication processes, password reset mechanisms and session management schemes

Objectives Achieved (Cont.)

- Helps prevent application downtime and improve productivity
- Identifies specific risks and provides detailed recommendations to mitigate the issues
- Supports user confidence in application security
- Supports efforts to achieve and maintain compliance with government and industry regulations
- Regularly review the application to ensure no new vulnerability is affecting the system

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Enhance your Development Staff's Capability in Application Security

- How do you make security a part of every phase of the SDLC?
  - Have educated people on staff.
- Variety of solutions but ONE that addresses from the holistic perceptive.
- Ways to address development:
  - IEEE: CSDA and CSDP (Software development)
  - SANS: GSSP-C, GSSP-J (Language specific/secure coding)
  - ISSECO: International Secure Software Engineering Council
    - CSSE (Entry level education program with certificate of completion given by International Software Quality Institute (iSQI)
  - DHS: Software Assurance Initiative (Awareness Program/Forum)
  - Vendor-Specific (ex: Microsoft, Symantec) based on internal lifecycle processes/technology specific

Purpose of CSSLP

- Addresses building security throughout the entire software lifecycle – from concept and planning through operations and maintenance, to the ultimate disposal.
- Provides a credential that speaks to the individual's ability to contribute to the delivery of secure software through the use of standards and best practices.
- The target professionals for this certification includes all stakeholders involved in the Software Lifecycle.

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Thank you!

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