CSX™
CYBERSECURITY NEXUS

CYBERSECURITY GOVERNANCE, RISK AND STANDARD

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KEYNOTE SPEECH – MICEEI 2014 – MAKASAR 26-30 NOV 20141

ISACA®
Trust in, and value from, information systems

SARWONO SUTIKNO, DR.ENG., CISA, CISSP, CISM

Current:

- Cybersecurity Nexus Liaison ISACA Indonesia
- ISACA Academic Advocate at ITB
- SME for Information Security Standard for ISO at ISACA HQ
- Associate Professor at School of Electrical Engineering and Informatics, Institut Teknologi Bandung
- Ketua WG Layanan dan Tata Kelola TI, anggota WG Keamanan Informasi serta Anggota Panitia Teknis 35-01 Program Nasional Penetapan Standar bidang Teknologi Informasi, BSN – Kominfo.

Past:

- Director of Certification – CRISC & CGEIT, ISACA Indonesia Chapter
- Ketua Kelompok Kerja Evaluasi TIK Nasional, Dewan TIK Nasional (2007-2008)
- Plt Direktur Operasi Sistem PPATK (Indonesia Financial Transaction Reports and Analysis Center, INTRAC), April 2009 – May 2011

Professional Certification:

- Professional Engineering (PE), the Principles and Practice of Electrical Engineering, College of Engineering, the University of Texas at Austin. 2000
- IRCA Information Security Management System Lead Auditor Course, 2004
- ISACA Certified Information System Auditor (CISA). CISA Number**:** 0540859, 2005
- Brainbench Computer Forensic, 2006
- $(ISC)^2$ Certified Information Systems Security Professional (CISSP), No: 118113, 2007
- ISACA Certified Information Security Manager (CISM). CISM Number**:** 0707414, 2007

Award:

- **$(ISC)^2$** Asia Pacific **Information Security Leadership Achievements (ISLA) 2011** award in category **Senior Information Security Professional**. http://isc2.org/ISLA

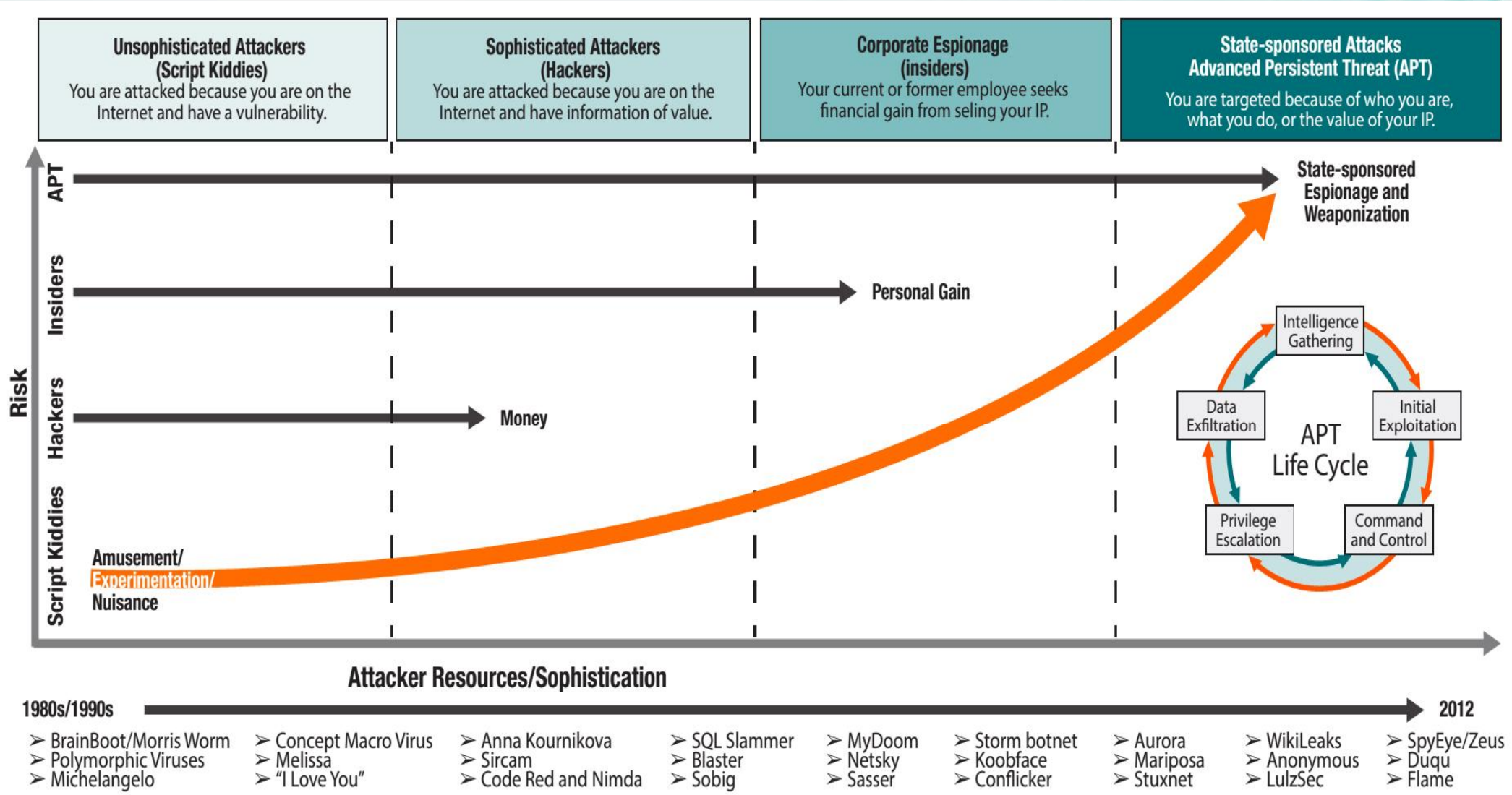
CYBERSECURITY – INFORMATION SECURITY

Cybersecurity is emerging within the fields of **information security** and traditional security to address sharp increases in cybercrime and, in some instances, evidence of cyberwarfare.

Cybersecurity includes the protection of information assets by addressing threats to information that is processed, stored and transported by **internetworked** information systems.

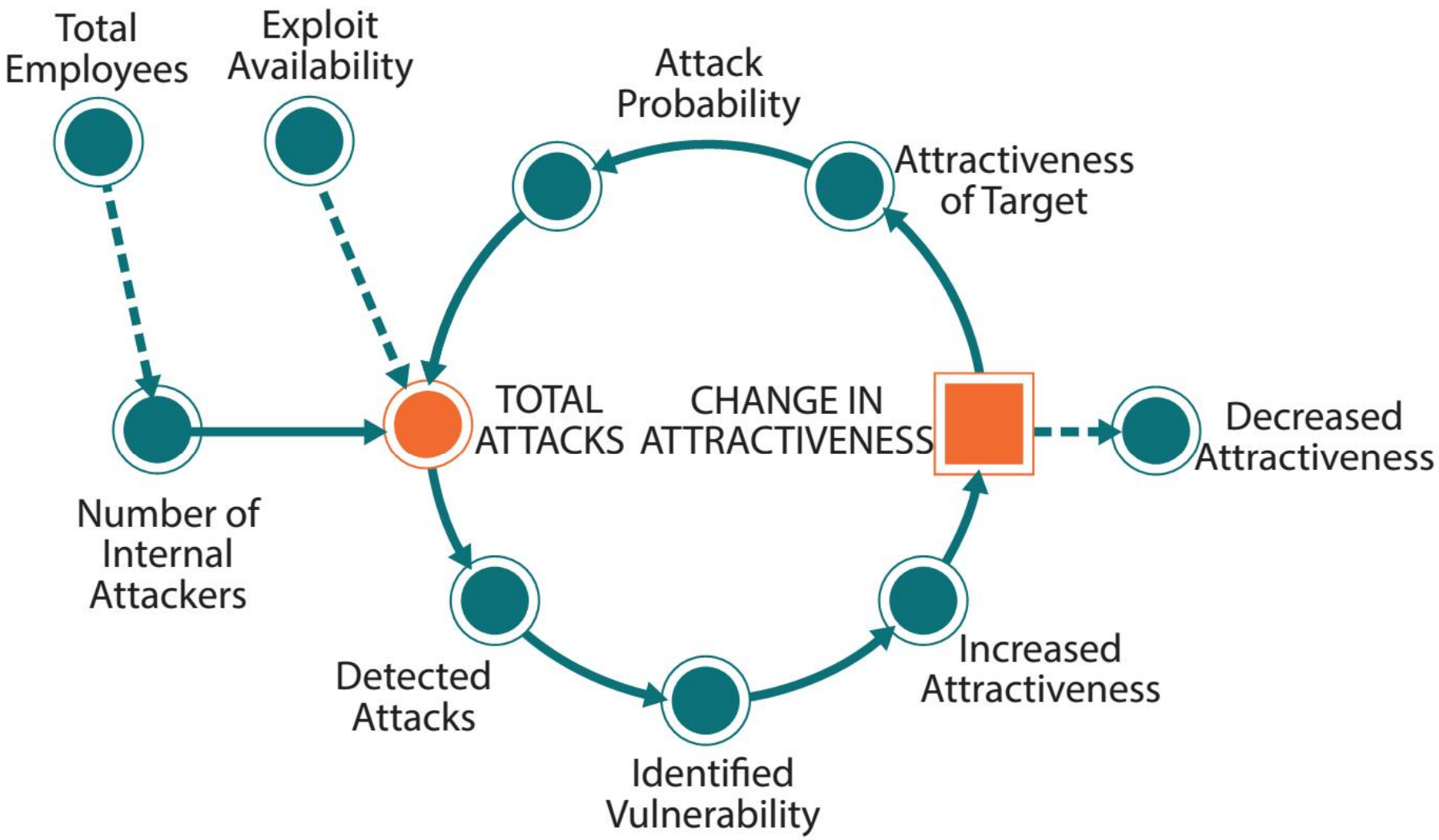
Source: *Transforming Cybersecurity*, ISACA, USA, 2013, figure 6

CYBERATTACK TAXONOMY



Source: *Responding to Targeted Cyberattacks, ISACA, USA, 2013, figure 2*

CYBERSECURITY SYSTEM DYNAMICS



Source: The Business Model for Information Security, ISACA, USA, 2010, figure 37

ASSURANCE – THREE LINES OF DEFENCE

- Internal controls testing
- Cybersecurity compliance
- Formal risk acceptances
- Investigation/forensics

Third line—Internal Audit

- Threats, vulnerailities, risk
- Formal risk evaluation
- Business impact analysis (BIA)
- Emerging risk

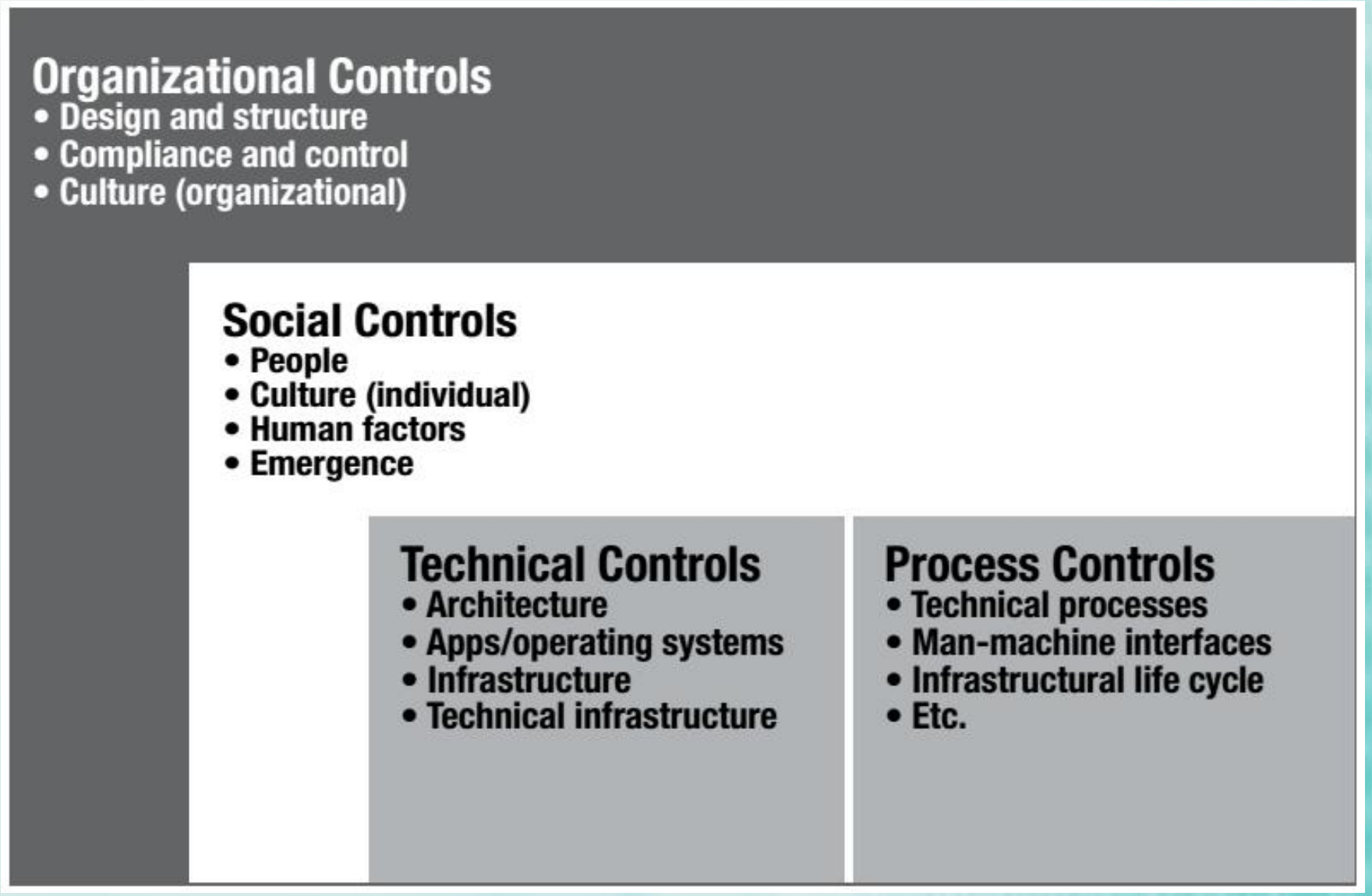
Second line—Risk Management

- Control self-assessments (CSAs)
- Attack/breach penetration testing
- Functional/technical testing
- Social/behavioral testing
- Regular management review

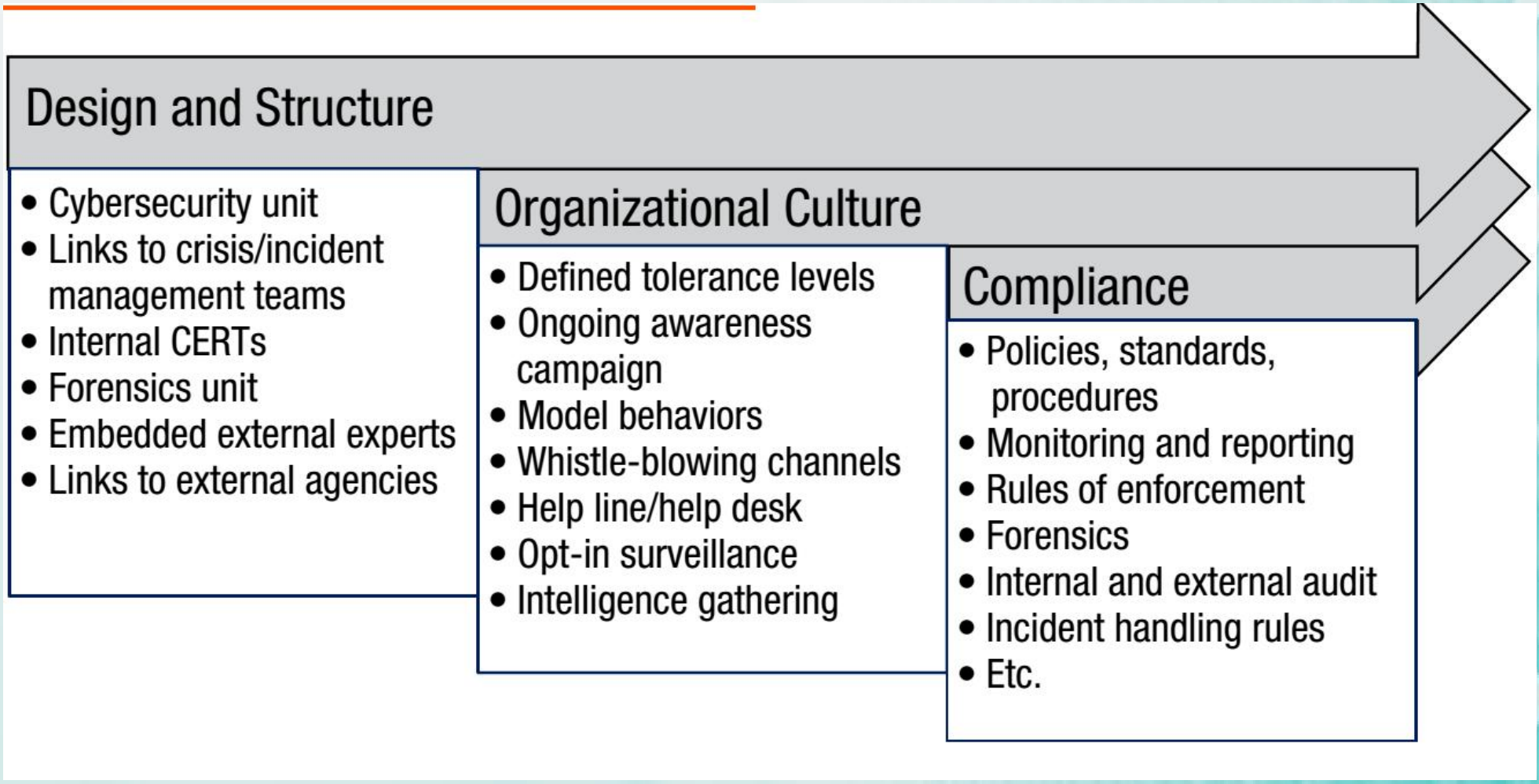
First line—Management

Source: Transforming Cybersecurity, ISACA, USA, 2013, figure 45

RISK BASED CATEGORIZATION OF CONTROL



ORGANIZATION LAYER CONTROL



SOCIAL LAYER CONTROL

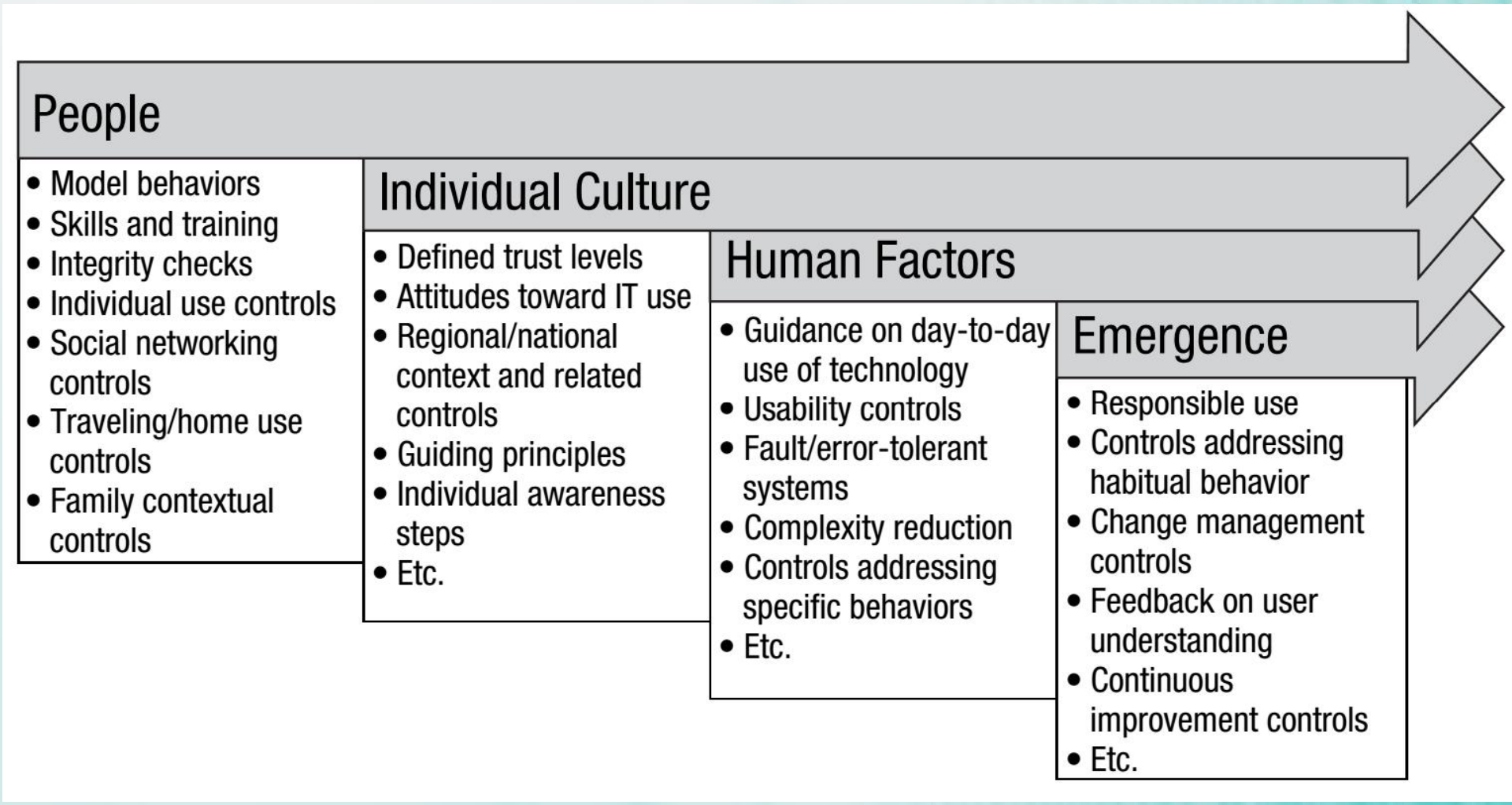
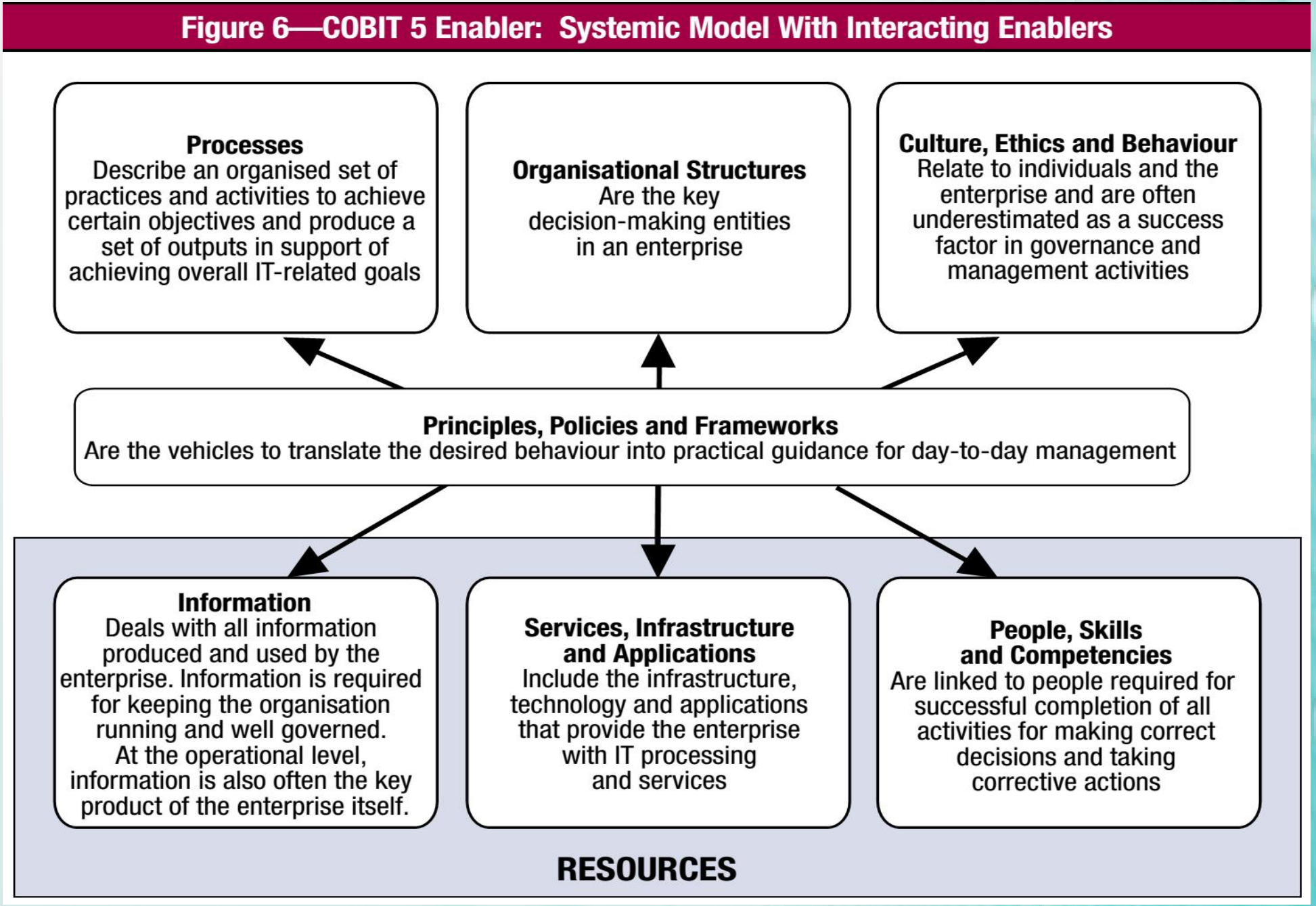


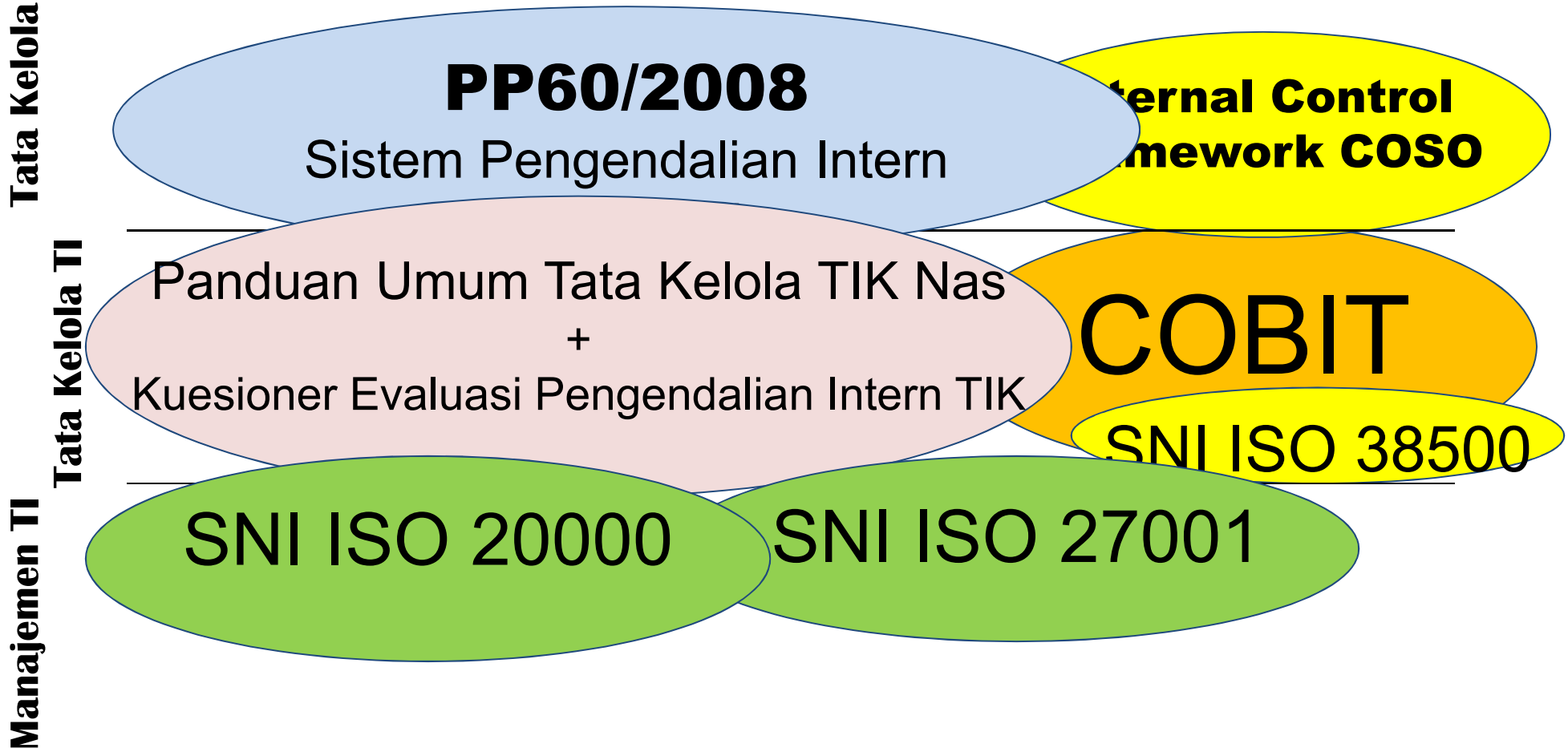
Figure 6—COBIT 5 Enabler: Systemic Model With Interacting Enablers



INTERNAL CONTROL (COSO 2013)

Internal control is defined as follows:
*Internal control is a process, **effected by an entity's board of directors, management, and other personnel**, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance.*

HUBUNGAN ANTAR KERANGKA



PERATURAN PEMERINTAH RI NO 60/2008 SPIP

BAB II

UNSUR SISTEM PENGENDALIAN INTERN PEMERINTAH

Bagian Kesatu

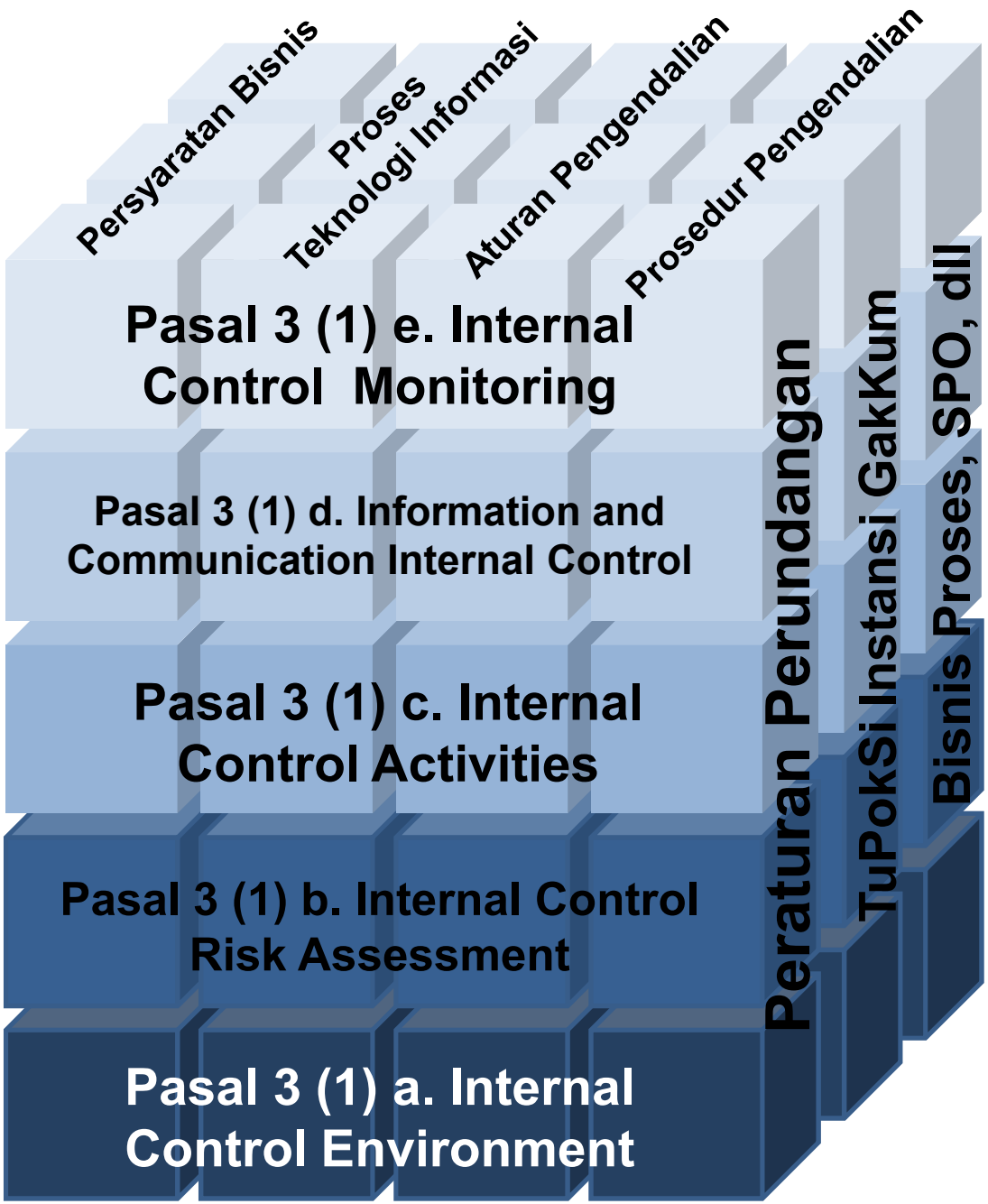
Umum

Pasal 3

(1) SPIP terdiri atas unsur:
   a. lingkungan pengendalian;
   b. penilaian risiko;
   c. kegiatan pengendalian;
   d. informasi dan komunikasi; dan
   e. pemantauan pengendalian intern.

(2) Penerapan unsur SPIP sebagaimana dimaksud pada ayat (1) dilaksanakan menyatu dan menjadi bagian integral dari kegiatan Instansi Pemerintah.

Hubungan PP60/2008 SPIP dan Tata Kelola TI



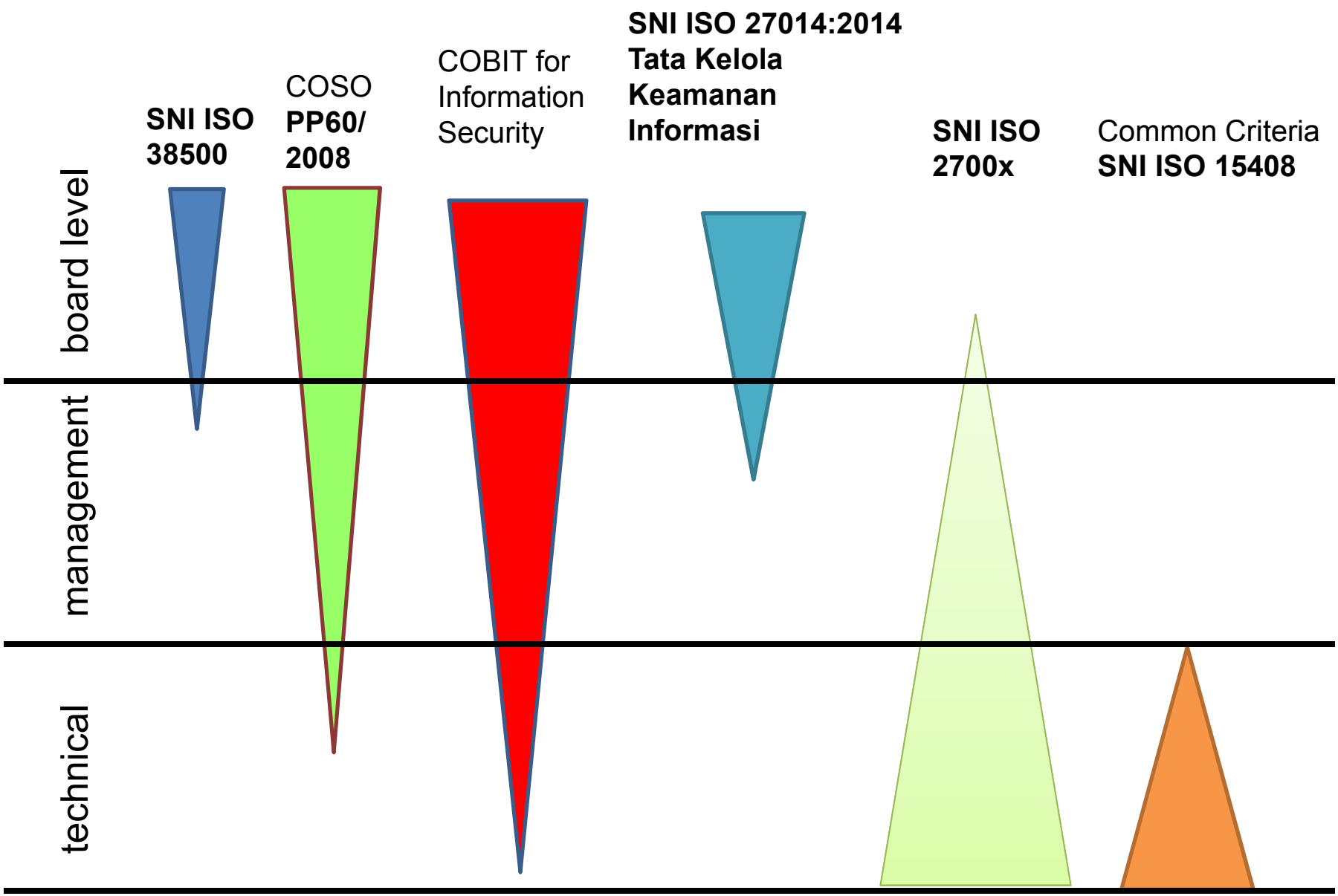
PP60/2008 Sistem Pengendalian Intern Pemerintah

Tata Kelola Teknologi Informasi,
PUTK-TIK Nas + KEPI-TIK v1.2.1

Best Practice (Operasional)

- SNI ISO 20000-1 Manajemen Layanan Teknologi Informasi
- SNI ISO/IEC 27001 Sistem Manajemen Keamanan Informasi

Kerangka dan Standar Keamanan Informasi



SERI SNI 15408 – KRITERIA EVALUASI KEAMANAN TI

ISO/IEC 15408-1:2009 Evaluation criteria for IT security - Part 1: Introduction and general model

SNI ISO/IEC 15408-1:2013 Teknologi informasi - Teknik keamanan - Kriteria evaluasi keamanan teknologi informasi - Bagian 1: Pengantar dan model umum

ISO/IEC 15408-2:2008 Evaluation criteria for IT security - Part 2: Security functional components

SNI ISO/IEC 15408-2:2013 Teknologi informasi - Teknik keamanan - Kriteria evaluasi keamanan teknologi informasi - Bagian 2: Komponen fungsional keamanan

ISO/IEC 15408-3:2008 Evaluation criteria for IT security - Part 3: Security assurance components

SNI ISO/IEC 15408-3:2013
Teknologi informasi - Teknik keamanan - Kriteria evaluasi keamanan teknologi informasi - Bagian 3: Komponen jaminan keamanan

REFERENCE

ISO, ISO/IEC 22301:2012 Societal security—Business continuity management systems—Requirements

ISO, ISO/IEC 22313:2012 Societal security—Business continuity management systems—Guidance

ISO, ISO/IEC 24762:2008 Information technology—Security techniques—Guidelines for information and communications technology disaster recovery services

ISO, ISO/IEC 27001:2013 Information technology—Security techniques—Information security management systems—Requirements

ISO, ISO/IEC 27005:2011 Information technology—Security techniques—Information security risk management.

ISO, ISO/IEC 27031:2011 Information technology—Security techniques—Guidelines for information and communication technology readiness for business continuity.

ISO, ISO/IEC 27032:2012 Information technology—Security techniques—Guidelines for cybersecurity.

ISO, ISO/IEC 31000:2009 Risk management—Principles and guidelines.

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ISACA, *European Cybersecurity Implementation: Resilience*, USA, 2014

ISACA, *European Cybersecurity Implementation: Risk Guidance,* USA, 2014

ISACA, *Responding to Targeted Cyberattacks*, USA, 2013, *www.isaca.org/Knowledge-Center/Research/ResearchDeliverables/Pages/Responding-to-Targeted-Cyberattacks.aspx*

ISACA, *Transforming Cybersecurity*, USA, 2013

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Discussion

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