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Symposium GIA - 28 février 2017, Québec

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Fiabilisez, optimisez et rentabilisez les systèmes d'information
Section de Québec

GIA SYMPOSIUM QUÉBEC 2017
GESTION DES IDENTITÉS ET DES ACCÈS

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AFFAIRES ET TECHNOLOGIES

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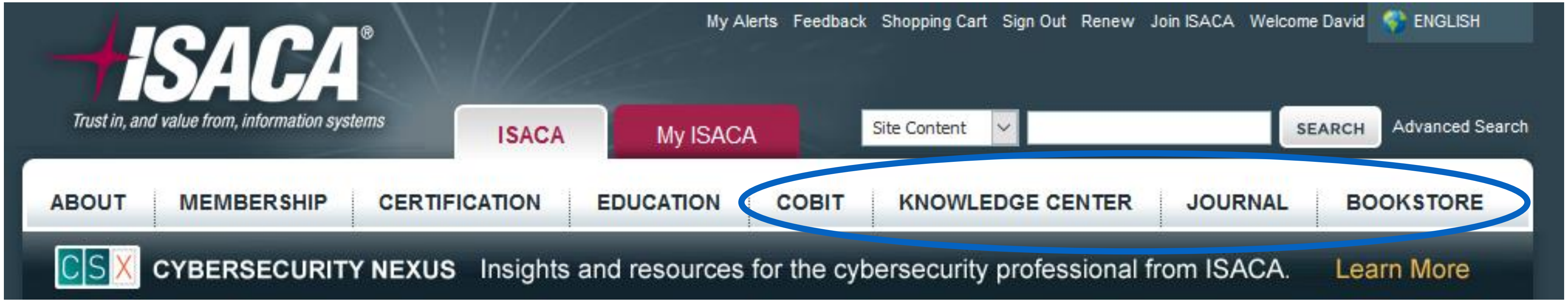

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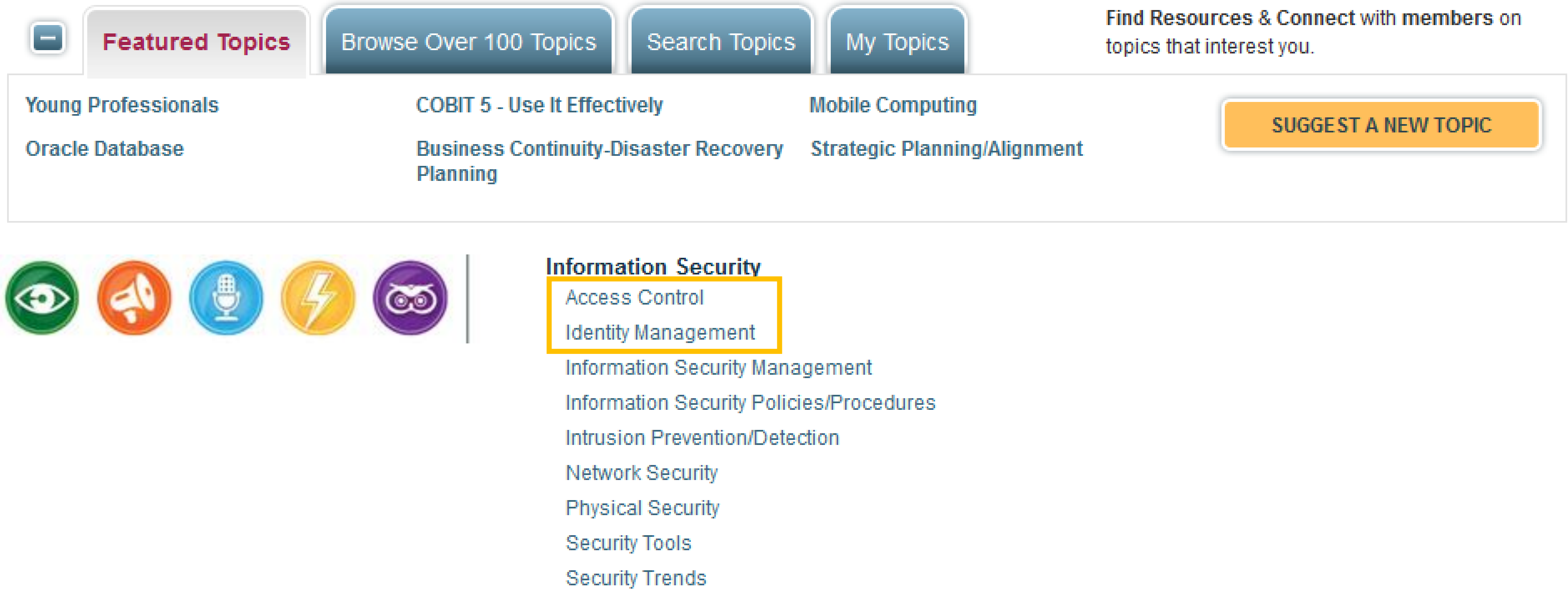

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Young Professionals

Oracle Database

COBIT 5 - Use It Effectively

Business Continuity-Disaster Recovery Planning

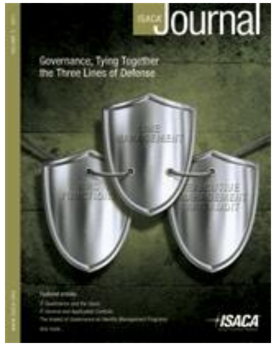
Mobile Computing

Strategic Planning/Alignment

Information Security

- Access Control
- Identity Management
- Information Security Management
- Information Security Policies/Procedures
- Intrusion Prevention/Detection
- Network Security
- Physical Security
- Security Tools
- Security Trends

The Impact of Governance on Identity Management Programs



Volume 5 , 2011

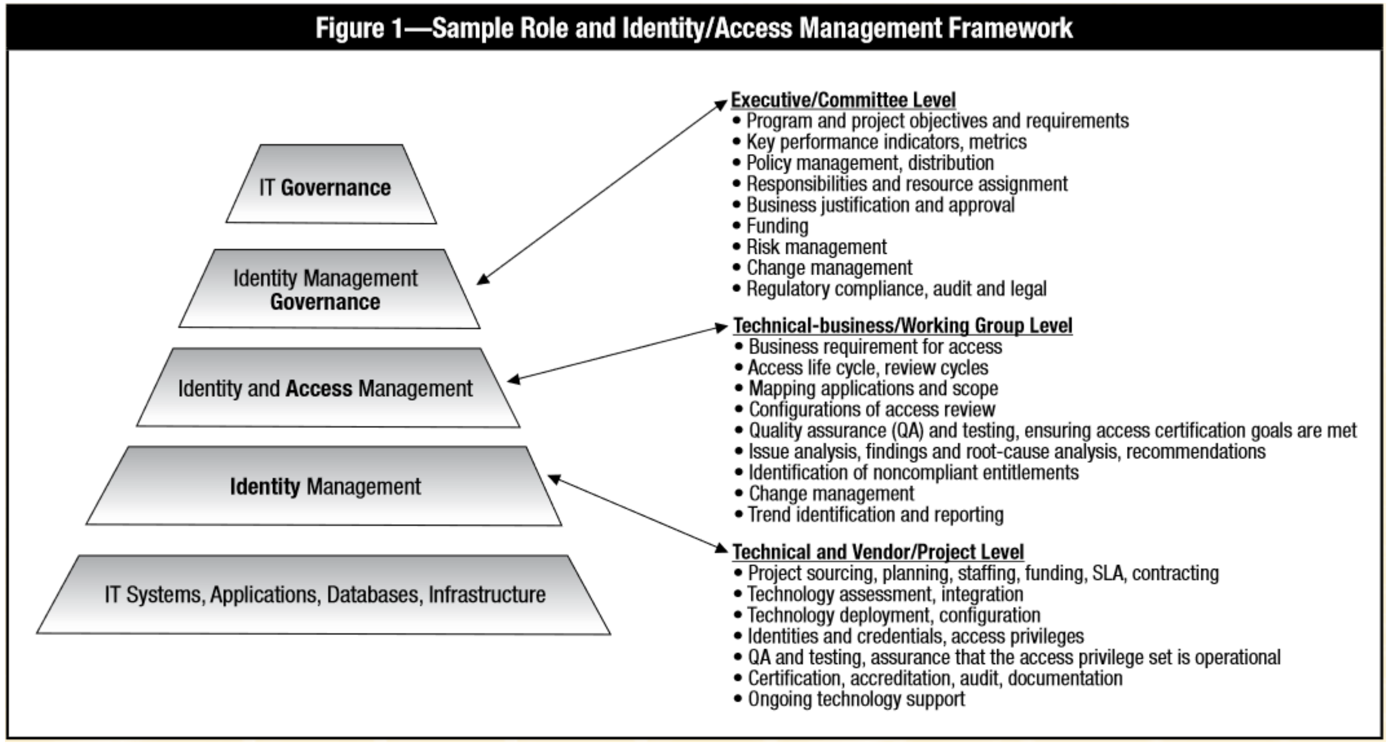


Figure 1—Sample Role and Identity/Access Management Framework

IT Governance
Identity Management Governance
Identity and Access Management
Identity Management
IT Systems, Applications, Databases, Infrastructure

Executive/Committee Level

- Program and project objectives and requirements
- Key performance indicators, metrics
- Policy management, distribution
- Responsibilities and resource assignment
- Business justification and approval
- Funding
- Risk management
- Change management
- Regulatory compliance, audit and legal

Technical-business/Working Group Level

- Business requirement for access
- Access life cycle, review cycles
- Mapping applications and scope
- Configurations of access review
- Quality assurance (QA) and testing, ensuring access certification goals are met
- Issue analysis, findings and root-cause analysis, recommendations
- Identification of noncompliant entitlements
- Change management
- Trend identification and reporting

Technical and Vendor/Project Level

- Project sourcing, planning, staffing, funding, SLA, contracting
- Technology assessment, integration
- Technology deployment, configuration
- Identities and credentials, access privileges
- QA and testing, assurance that the access privilege set is operational
- Certification, accreditation, audit, documentation
- Ongoing technology support

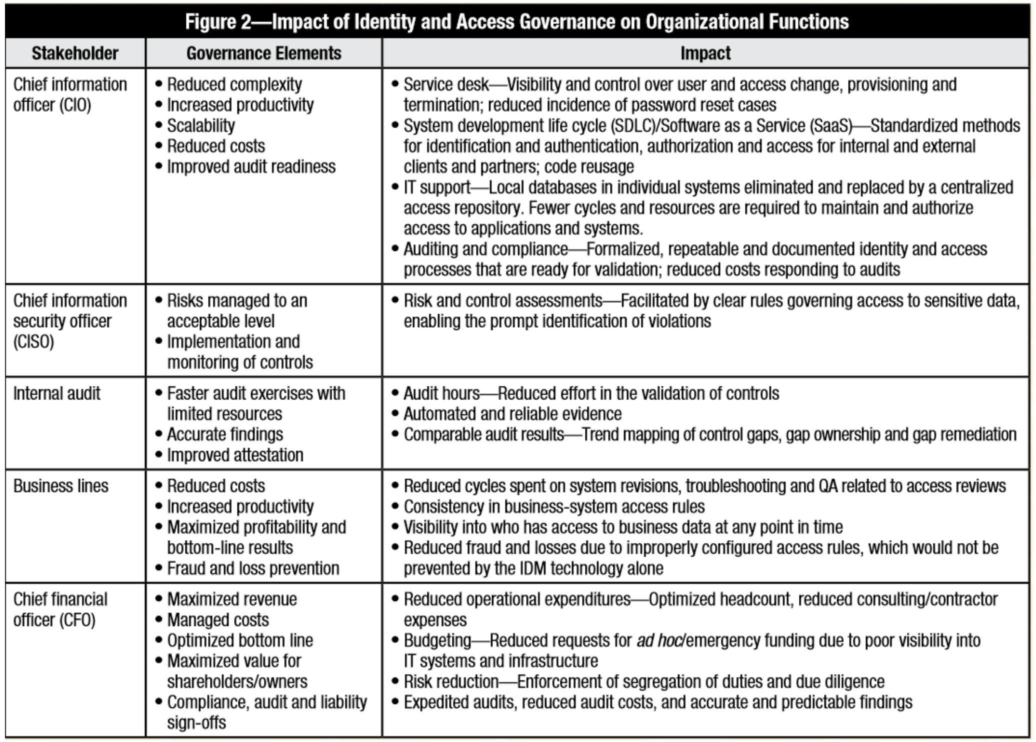
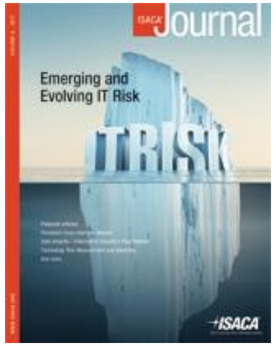


Figure 2—Impact of Identity and Access Governance on Organizational Functions

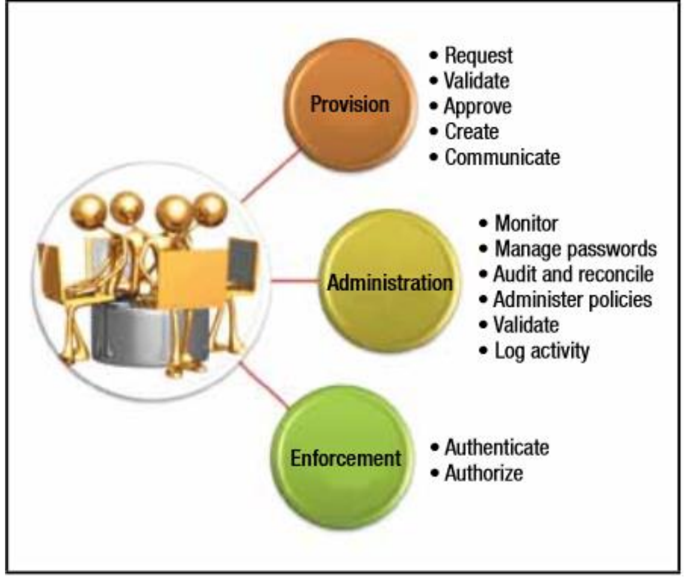
Stakeholder	Governance Elements	Impact
Chief information officer (CIO)	• Reduced complexity • Increased productivity • Scalability • Reduced costs • Improved audit readiness	• Service desk—Visibility and control over user and access change, provisioning and termination; reduced incidence of password reset cases • System development life cycle (SDLC)/Software as a Service (SaaS)—Standardized methods for identification and authentication, authorization and access for internal and external clients and partners; code reusage • IT support—Local databases in individual systems eliminated and replaced by a centralized access repository. Fewer cycles and resources are required to maintain and authorize access to applications and systems. • Auditing and compliance—Formalized, repeatable and documented identity and access processes that are ready for validation; reduced costs responding to audits
Chief information security officer (CISO)	• Risks managed to an acceptable level • Implementation and monitoring of controls	• Risk and control assessments—Facilitated by clear rules governing access to sensitive data, enabling the prompt identification of violations
Internal audit	• Faster audit exercises with limited resources • Accurate findings • Improved attestation	• Audit hours—Reduced effort in the validation of controls • Automated and reliable evidence • Comparable audit results—Trend mapping of control gaps, gap ownership and gap remediation
Business lines	• Reduced costs • Increased productivity • Maximized profitability and bottom-line results • Fraud and loss prevention	• Reduced cycles spent on system revisions, troubleshooting and QA related to access reviews • Consistency in business-system access rules • Visibility into who has access to business data at any point in time • Reduced fraud and losses due to improperly configured access rules, which would not be prevented by the IDM technology alone
Chief financial officer (CFO)	• Maximized revenue • Managed costs • Optimized bottom line • Maximized value for shareholders/owners • Compliance, audit and liability sign-offs	• Reduced operational expenditures—Optimized headcount, reduced consulting/contractor expenses • Budgeting—Reduced requests for *ad hoc*/emergency funding due to poor visibility into IT systems and infrastructure • Risk reduction—Enforcement of segregation of duties and due diligence • Expedited audits, reduced audit costs, and accurate and predictable findings

Identity and Access Management - Its Role in Sarbanes-Oxley Compliance



Volume 6 , 2011

Figure 2—Stages for an IAM System



Provision
- Request
- Validate
- Approve
- Create
- Communicate

Administration
- Monitor
- Manage passwords
- Audit and reconcile
- Administer policies
- Validate
- Log activity

Enforcement
- Authenticate
- Authorize

ISACA Journal

Solving the Identity and Access Management Conundrum

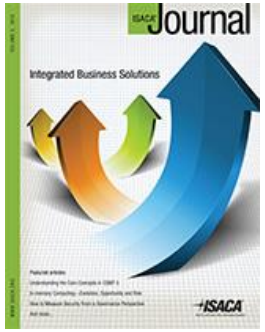


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Figure 1—Benefits Realization Through a Phased Road Map

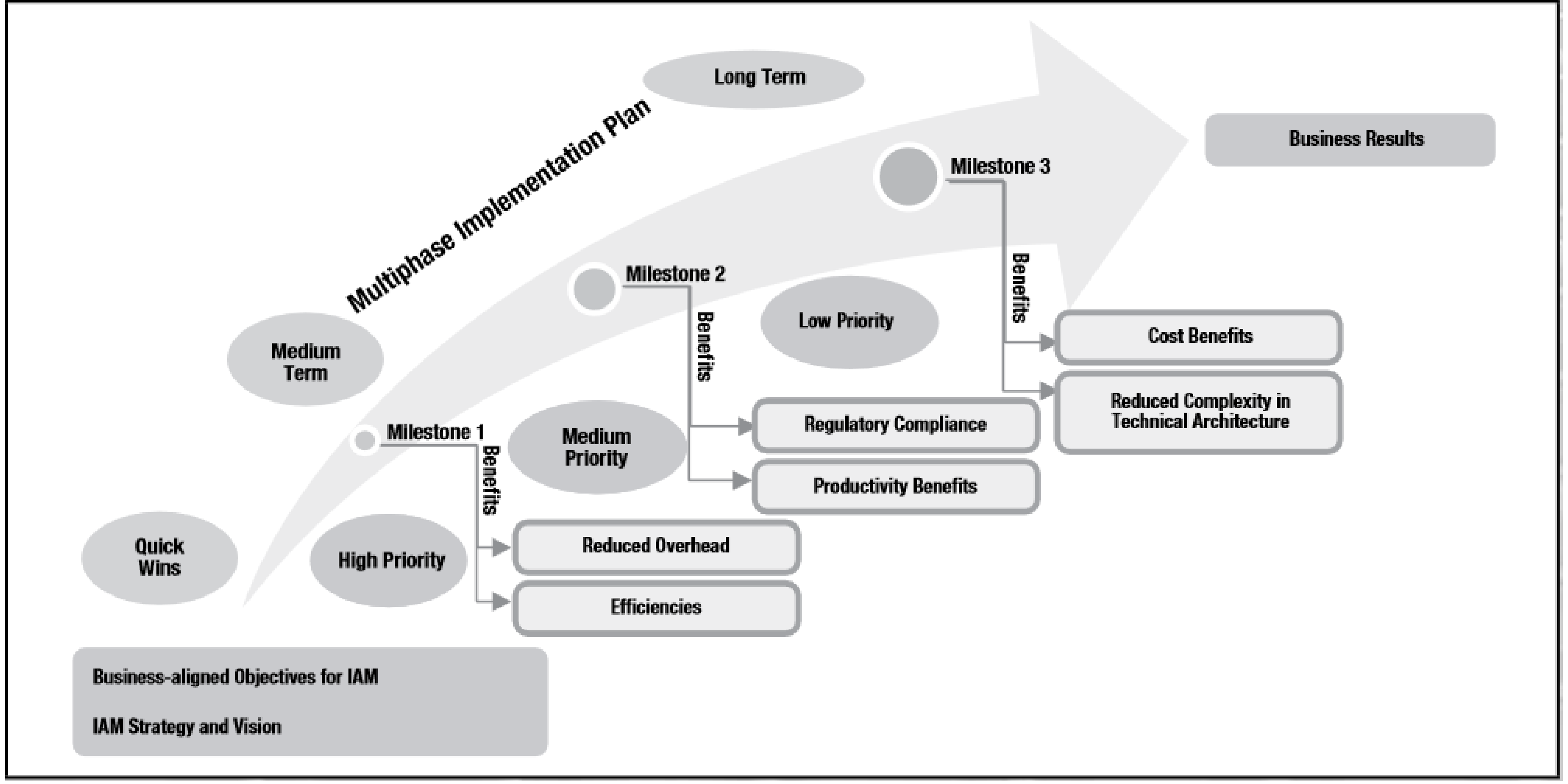
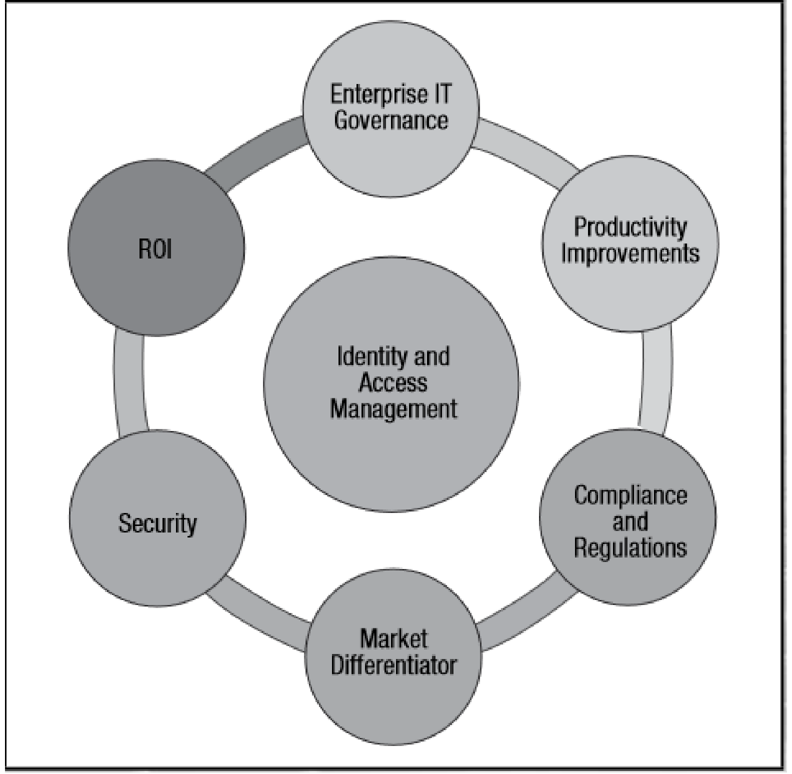


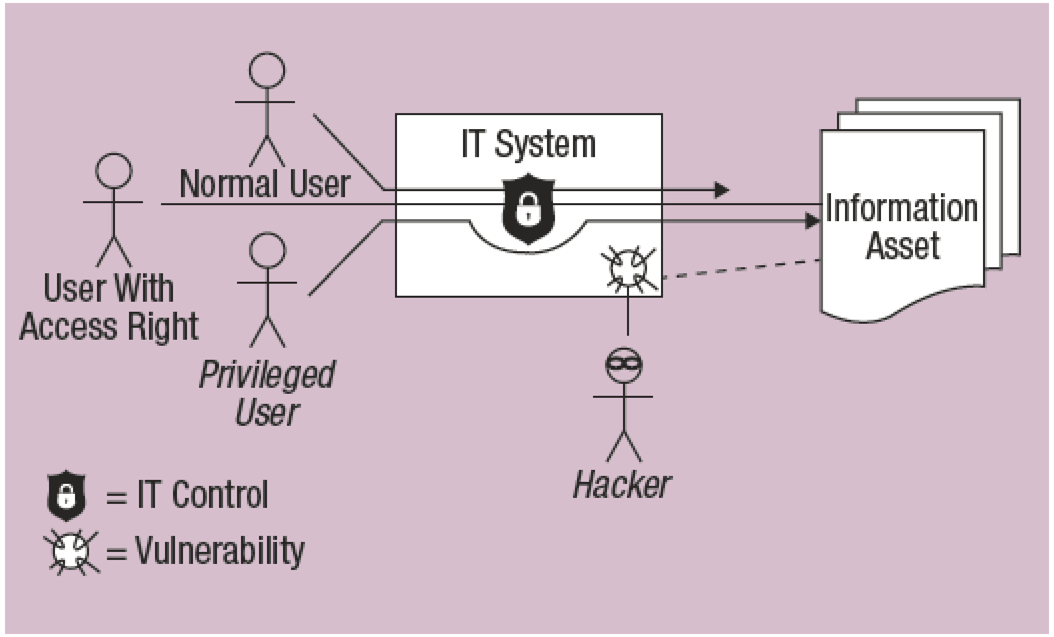
Figure 2—IAM Target Goals


Enterprise IT Governance
ROI
Productivity Improvements
Identity and Access Management
Security
Compliance and Regulations
Market Differentiator

Capability Framework for Privileged Access Management

Volume 1 , 2017

Figure 1—Distinguishing Privileged Access From Regular Access to Information Assets



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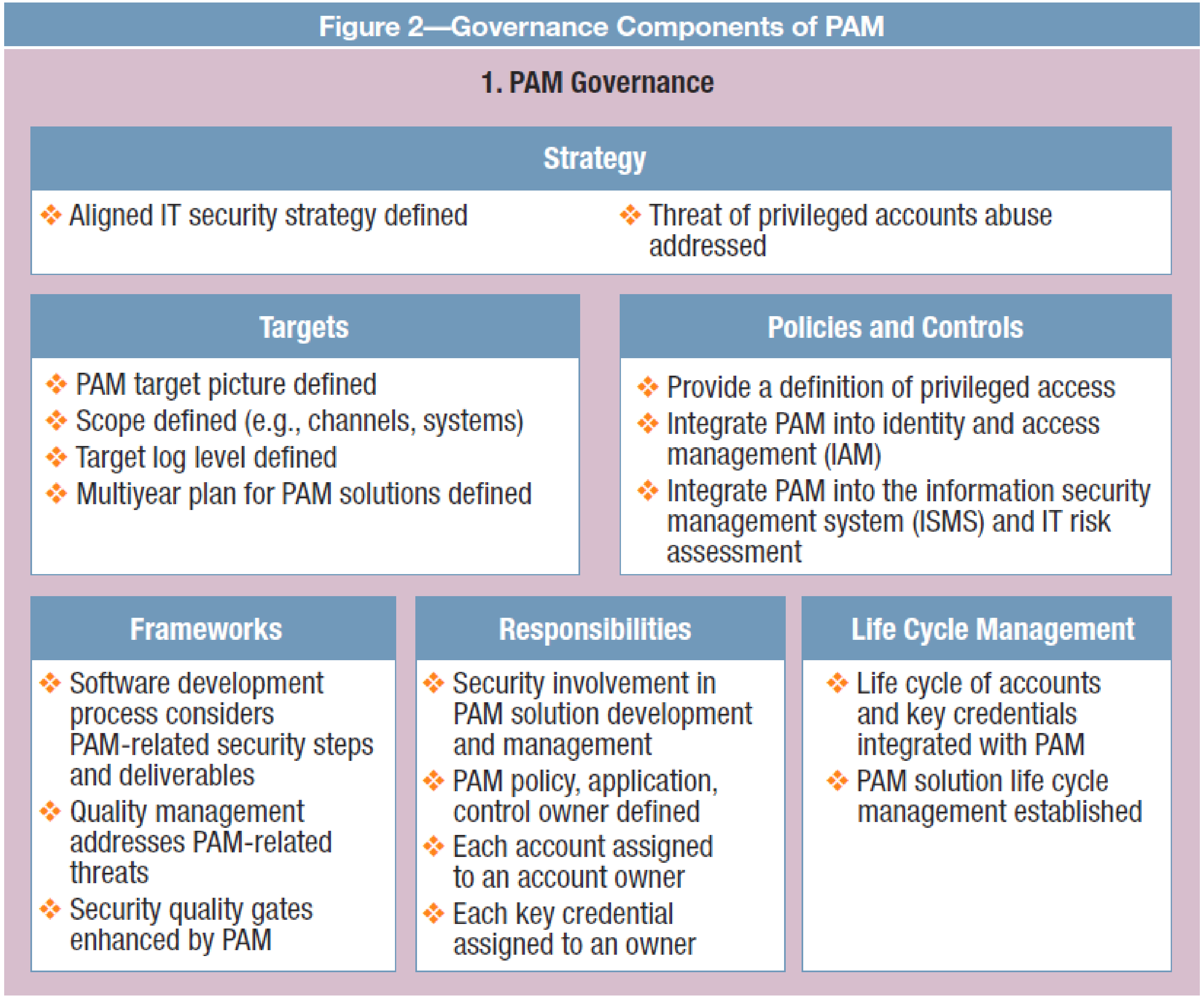

Figure 2—Governance Components of PAM

1. PAM Governance

Strategy

- Aligned IT security strategy defined
- Threat of privileged accounts abuse addressed

Targets

- PAM target picture defined
- Scope defined (e.g., channels, systems)
- Target log level defined
- Multiyear plan for PAM solutions defined

Policies and Controls

- Provide a definition of privileged access
- Integrate PAM into identity and access management (IAM)
- Integrate PAM into the information security management system (ISMS) and IT risk assessment

Frameworks

- Software development process considers PAM-related security steps and deliverables
- Quality management addresses PAM-related threats
- Security quality gates enhanced by PAM

Responsibilities

- Security involvement in PAM solution development and management
- PAM policy, application, control owner defined
- Each account assigned to an account owner
- Each key credential assigned to an owner

Life Cycle Management

- Life cycle of accounts and key credentials integrated with PAM
- PAM solution life cycle management established

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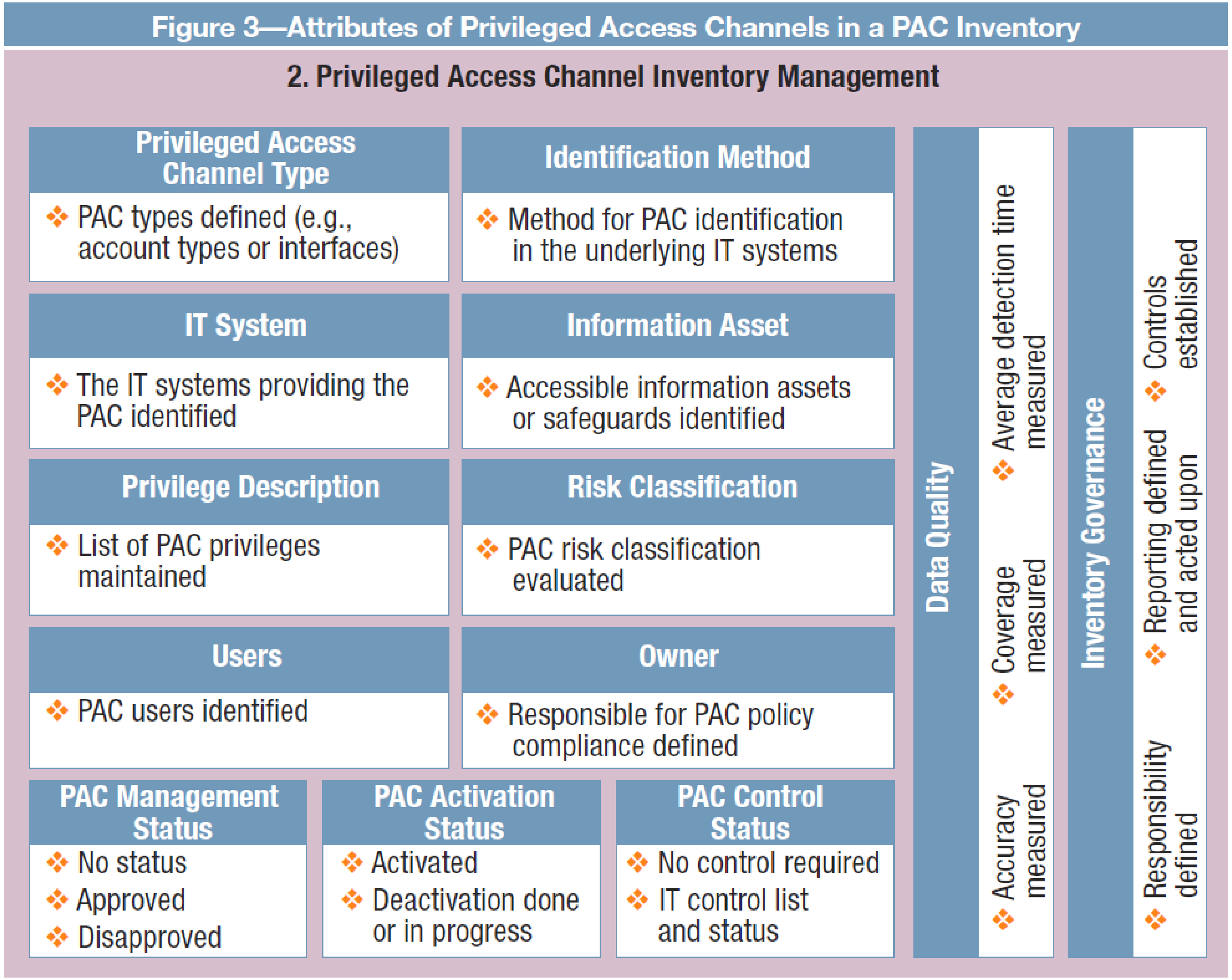

Figure 3—Attributes of Privileged Access Channels in a PAC Inventory

2. Privileged Access Channel Inventory Management

Privileged Access Channel Type
- PAC types defined (e.g., account types or interfaces)

Identification Method
- Method for PAC identification in the underlying IT systems

IT System
- The IT systems providing the PAC identified

Information Asset
- Accessible information assets or safeguards identified

Privilege Description
- List of PAC privileges maintained

Risk Classification
- PAC risk classification evaluated

Users
- PAC users identified

Owner
- Responsible for PAC policy compliance defined

PAC Management Status
- No status
- Approved
- Disapproved

PAC Activation Status
- Activated
- Deactivation done or in progress

PAC Control Status
- No control required
- IT control list and status

Data Quality
- Accuracy measured
- Coverage measured
- Average detection time measured

Inventory Governance
- Responsibility defined
- Reporting defined and acted upon
- Controls established

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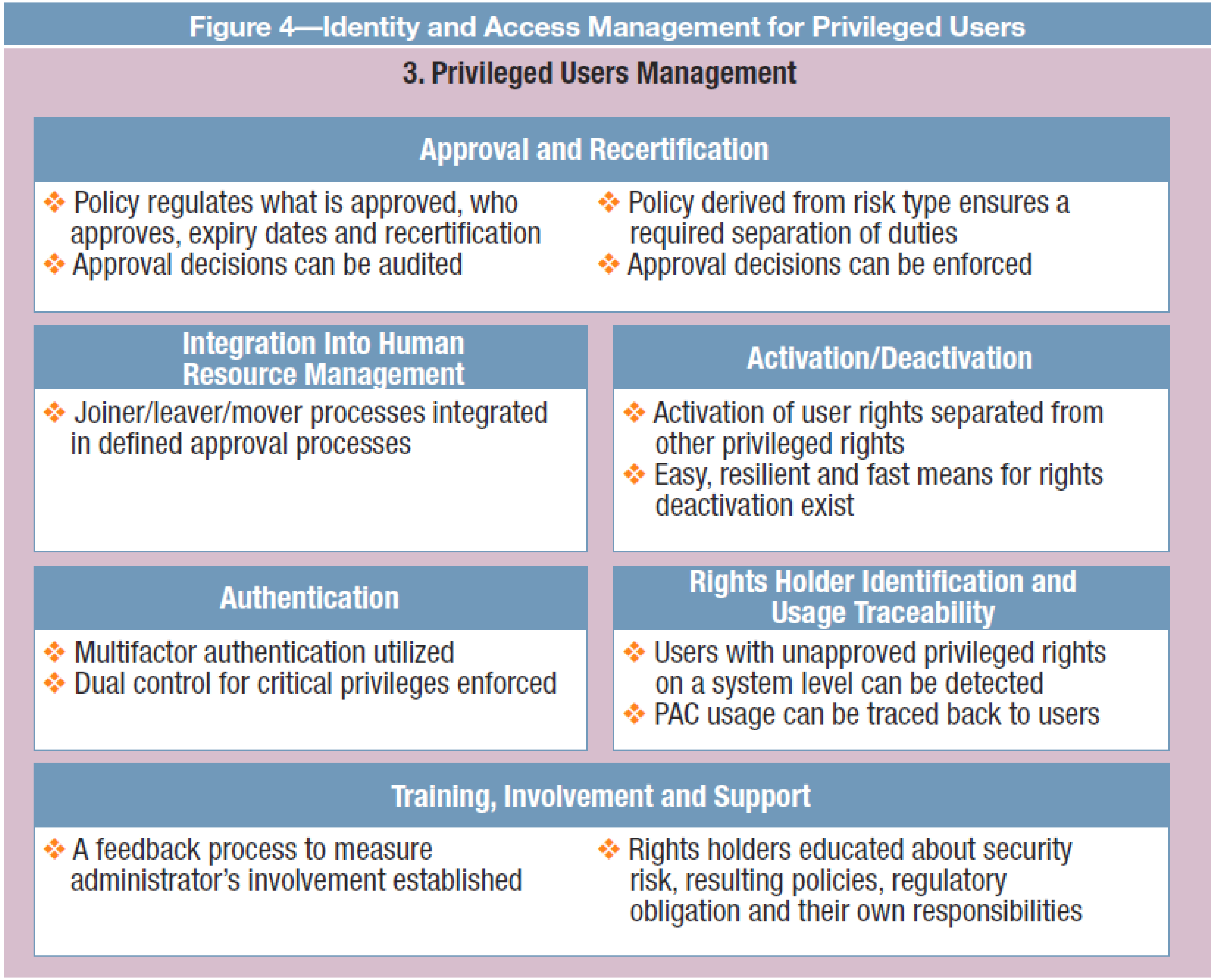

Figure 4—Identity and Access Management for Privileged Users

3. Privileged Users Management

Approval and Recertification

- Policy regulates what is approved, who approves, expiry dates and recertification
- Approval decisions can be audited
- Policy derived from risk type ensures a required separation of duties
- Approval decisions can be enforced

Integration Into Human Resource Management

- Joiner/leaver/mover processes integrated in defined approval processes

Activation/Deactivation

- Activation of user rights separated from other privileged rights
- Easy, resilient and fast means for rights deactivation exist

Authentication

- Multifactor authentication utilized
- Dual control for critical privileges enforced

Rights Holder Identification and Usage Traceability

- Users with unapproved privileged rights on a system level can be detected
- PAC usage can be traced back to users

Training, Involvement and Support

- A feedback process to measure administrator's involvement established
- Rights holders educated about security risk, resulting policies, regulatory obligation and their own responsibilities

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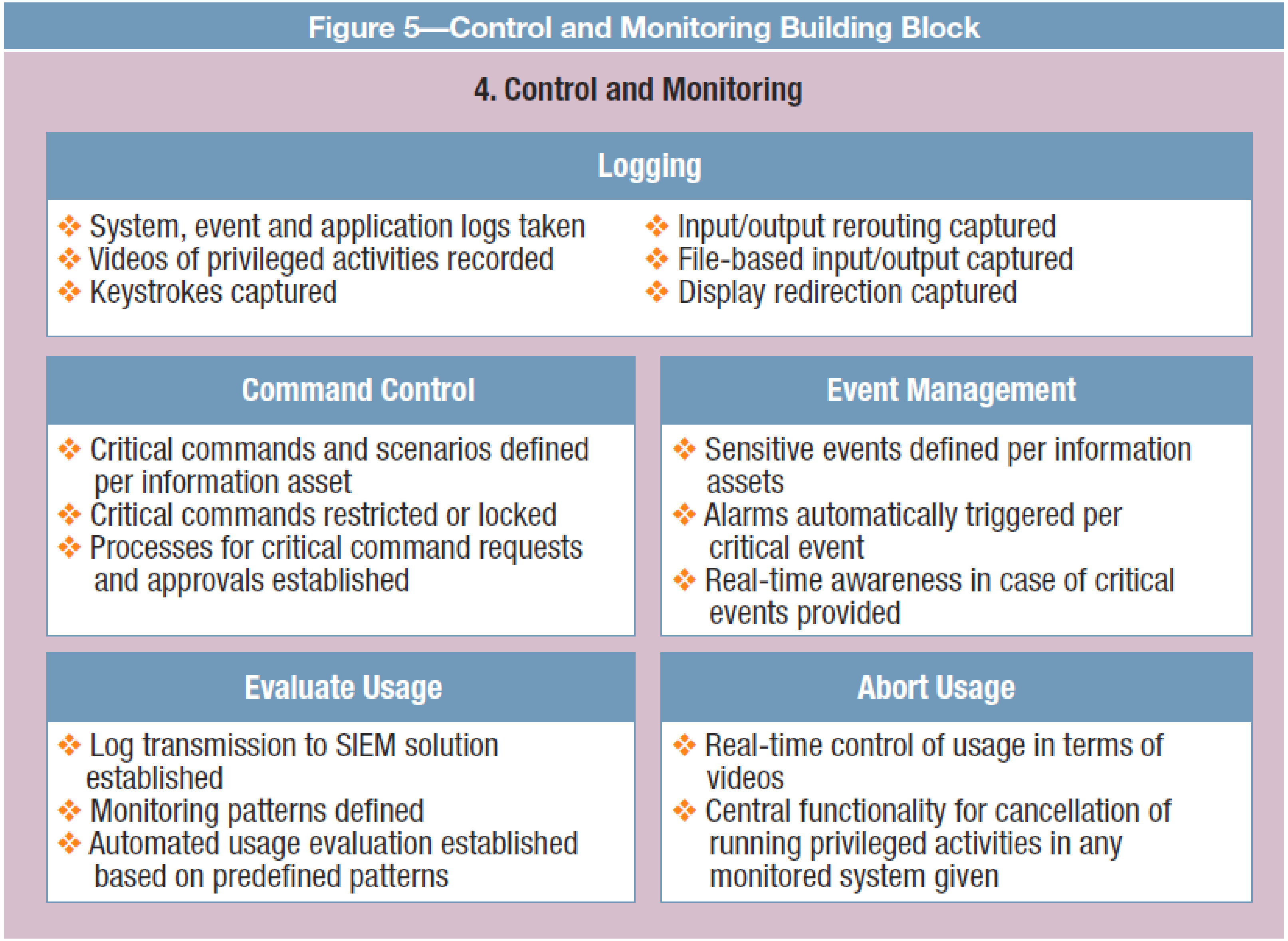

Figure 5—Control and Monitoring Building Block

4. Control and Monitoring

Logging

- System, event and application logs taken
- Videos of privileged activities recorded
- Keystrokes captured
- Input/output rerouting captured
- File-based input/output captured
- Display redirection captured

Command Control

- Critical commands and scenarios defined per information asset
- Critical commands restricted or locked
- Processes for critical command requests and approvals established

Event Management

- Sensitive events defined per information assets
- Alarms automatically triggered per critical event
- Real-time awareness in case of critical events provided

Evaluate Usage

- Log transmission to SIEM solution established
- Monitoring patterns defined
- Automated usage evaluation established based on predefined patterns

Abort Usage

- Real-time control of usage in terms of videos
- Central functionality for cancellation of running privileged activities in any monitored system given

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Merci !

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