

bsi.

● เข้าใจการ implement หลัก ๆ ของ
การเปลี่ยนแปลง ตามข้อกำหนด
ISO/IEC 27001:2022

bsi Group (Thailand)



By Royal Charter



Discussion items

สรุปภาพรวม ISO/IEC 27001:2022



ภาพรวมการเปลี่ยนแปลง และเทคนิค
การ implement การเปลี่ยนแปลงข้อ
4-10



ภาพรวมการเปลี่ยนแปลง เทคนิคการ
implement การเปลี่ยนแปลงcontrol



Transitioning your ISO/IEC
27001:2013 ISMS

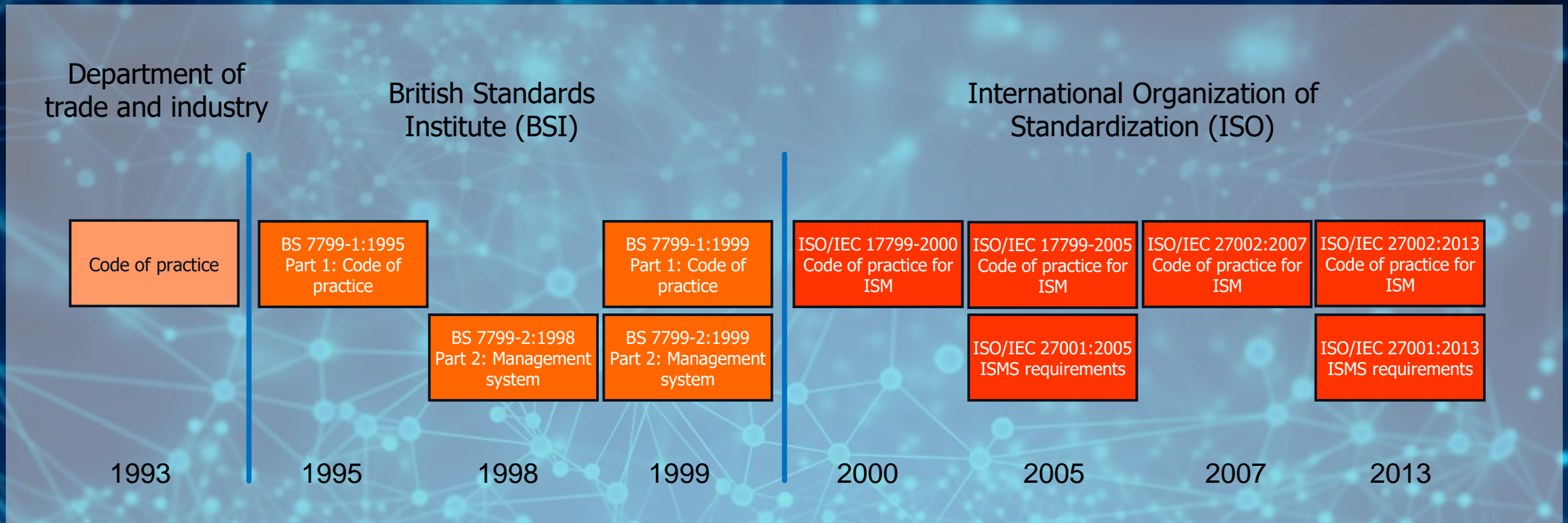




สรุปภาพรวม
ISO/IEC 27001:2022

History of ISO/IEC 27001 and ISO/IEC 27002

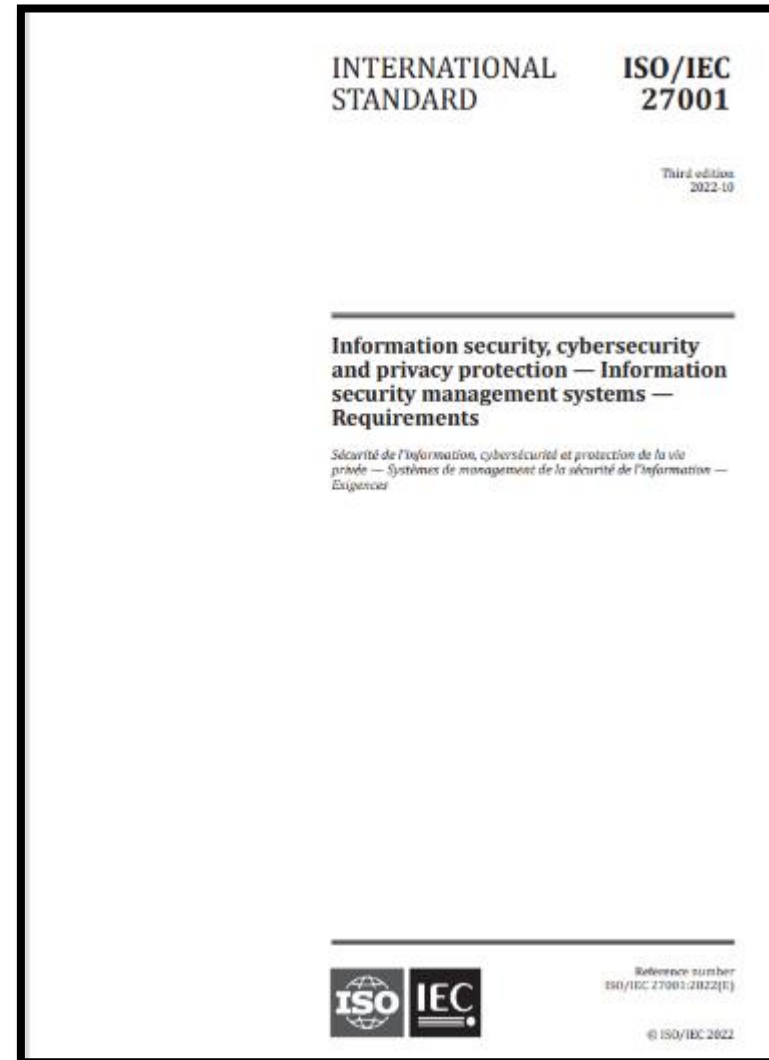
BS 7799 to ISO/IEC 27001



New Chapter of ISO/IEC 27001:2022 and ISO/IEC 27002:2022

February 2022


October 2022



ผลกระทบของการเปลี่ยนแปลง ISO/IEC 27002 ต่อ ISO/IEC 27001

ISO/IEC 27001
Information Security Management System requirement

For the assessment and treatment of information security risks tailored to the needs of the organization



Information Security Control Annex A (A5-A18)

ISO/IEC 27002
Code of practice for information security controls

Information Security control Practice Requirement 5 – 18



ISO/IEC 27002

Information security, cybersecurity and privacy protection — Information security controls

Version 2022

Changed in Security control

Example of Annex A

ISO/IEC 27001:2022(E)

Annex A (normative)

Information security controls reference

The information security controls listed in [Table A.1](#) are directly derived from and aligned with those listed in ISO/IEC 27002:2022^[1], Clauses 5 to 8, and shall be used in context with [6.1.3](#).

Table A.1 — Information security controls

5	Organizational controls	
5.1	Policies for information security	Control Information security policy and topic-specific policies shall be defined, approved by management, published, communicated to and acknowledged by relevant personnel and relevant interested parties, and reviewed at planned intervals and if significant changes occur.
5.2	Information security roles and responsibilities	Control Information security roles and responsibilities shall be defined and allocated according to the organization needs.
5.3	Segregation of duties	Control Conflicting duties and conflicting areas of responsibility shall be segregated.
5.4	Management responsibilities	Control Management shall require all personnel to apply information security in accordance with the established information security policy, topic-specific policies and procedures of the organization.
5.5	Contact with authorities	Control The organization shall establish and maintain contact with relevant authorities.
5.6	Contact with special interest groups	Control The organization shall establish and maintain contact with special interest groups or other specialist security forums and professional associations.
5.7	Threat intelligence	Control Information relating to information security threats shall be collected and analysed to produce threat intelligence.
5.8	Information security in project management	Control Information security shall be integrated into project management.
5.9	Inventory of information and other associated assets	Control An inventory of information and other associated assets, including owners, shall be developed and maintained.
5.10	Acceptable use of information and other associated assets	Control Rules for the acceptable use and procedures for handling information and other associated assets shall be identified, documented and implemented.
5.11	Return of assets	Control Personnel and other interested parties as appropriate shall return all the organization's assets in their possession upon change or termination of their employment, contract or agreement.

Who was involved in its development?



International Organization for Standardization



International Electrotechnical Commission

Joint technical committee ISO/IEC JTC 1

ISO standards for information security management

BE EN ISO/IEC 27000:2020



BSI Standards Publication

Information technology – Security techniques –
Information security management
systems – Overview and vocabulary

bsi.

INTERNATIONAL STANDARD **ISO/IEC 27001**

Third edition
2022-10

Information security, cybersecurity and privacy protection – Information security management systems – Requirements

Sécurité de l'information, cybersécurité et protection de la vie privée – Systèmes de management de la sécurité de l'information – Exigences



Reference number
ISO/IEC 27001:2022(E)

© ISO/IEC 2022

INTERNATIONAL STANDARD **ISO/IEC 27002**

Third edition
2022-02

Information security, cybersecurity and privacy protection – Information security controls

Sécurité de l'information, cybersécurité et protection de la vie privée – Mesures de sécurité de l'information



Reference number
ISO/IEC 27002:2022(E)

© ISO/IEC 2022

● Key concepts and processes

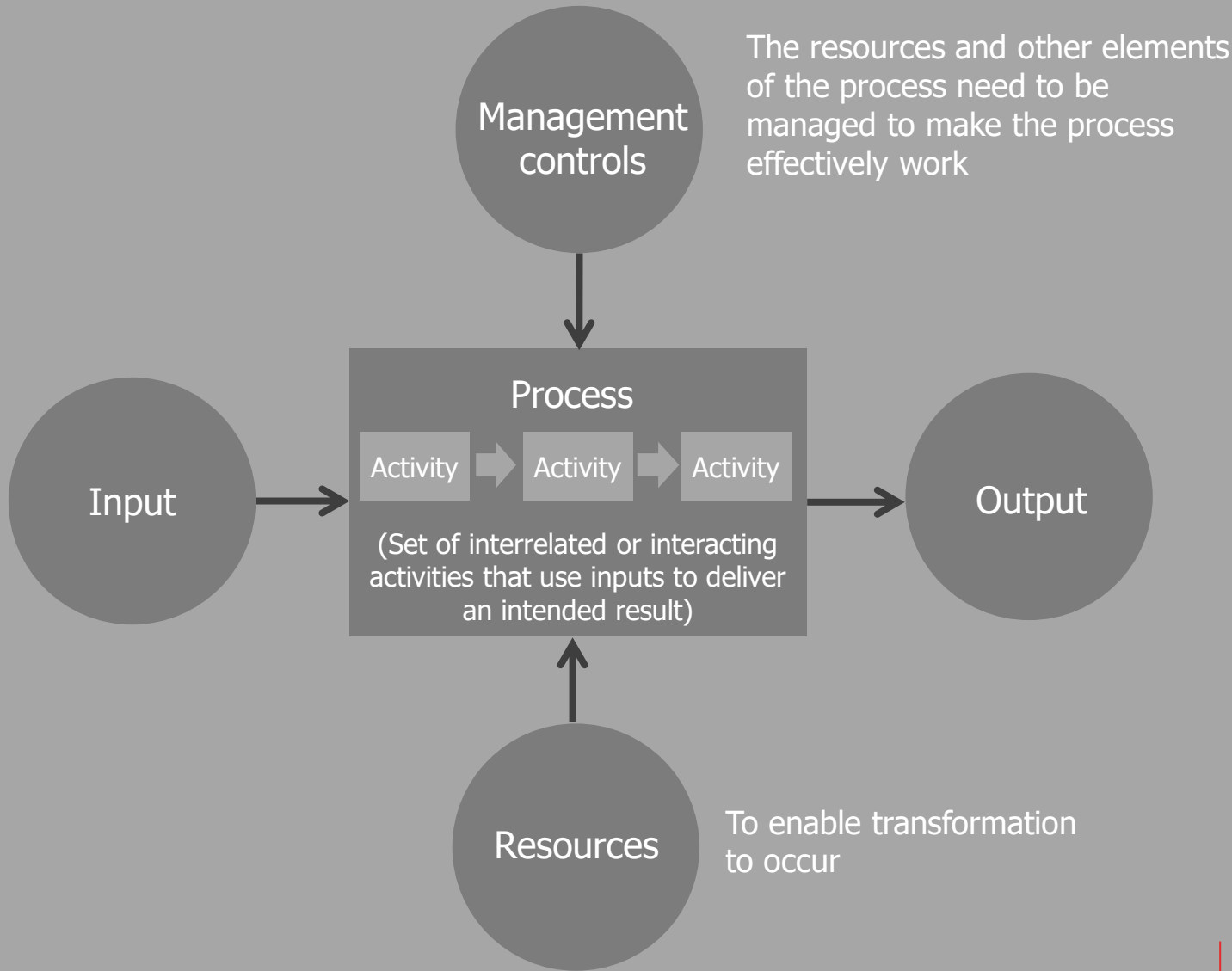
Key concepts : Risk-based thinking

Risk is the **effect** of **uncertainty**
on objectives'

RISK

Key concepts: Risk-based thinking

One of the purposes of an ISMS is to act as a preventive tool



Monitoring and measurement opportunities
(Before, during, and after the process)

What is a process?

MARIO Model: A process approach

- **M** for Management
- **A** for Activity
- **R** for Resources
- **I** for Inputs and
- **O** for Outputs

Key concepts: Process approach

An understanding of the intended results and requirements



Improvement of processes based on evaluation of data and information



Meeting requirements and customer satisfaction



Consideration of processes in terms of adding value and effective performance



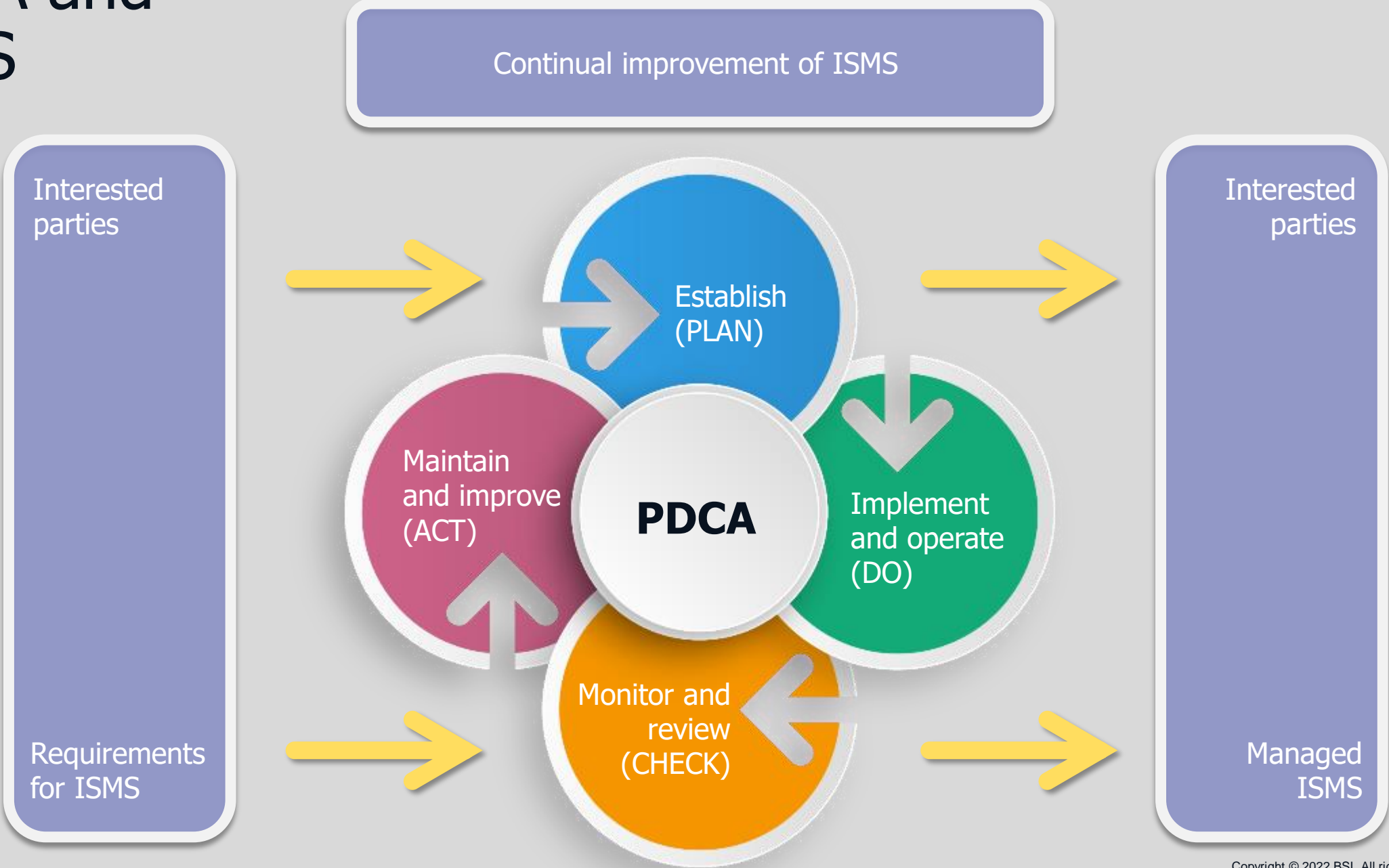
Consistent and predictable results



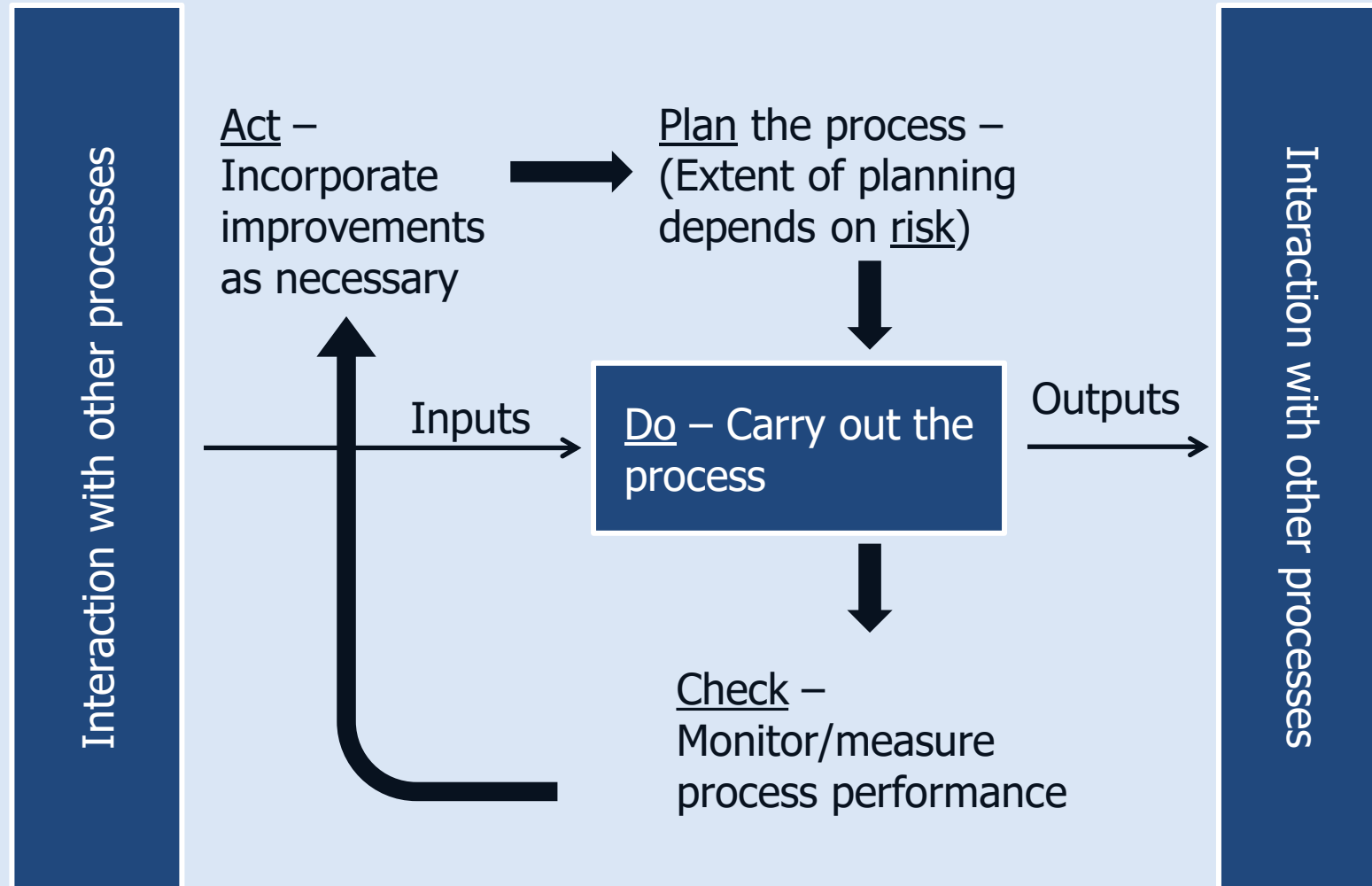
Understanding and management of interrelated processes



PDCA and ISMS



Key concepts: Plan-Do-Check-Act (PDCA)




Key concepts: Process



Key concepts: Harmonized approach

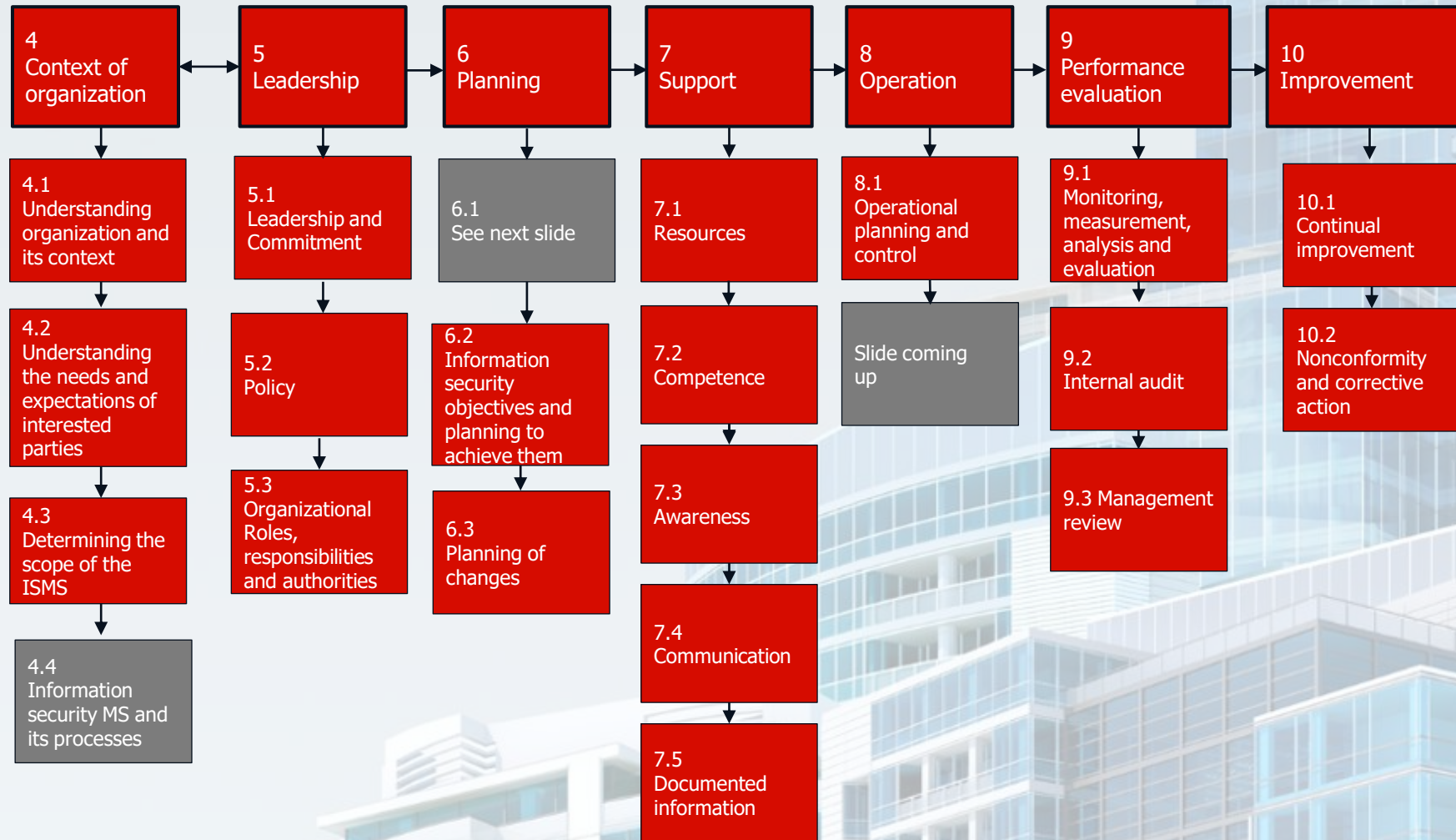
The belief is that this will enhance consistency, make standards more generic and more easily applicable to service industries



Key concepts: Harmonized approach

The harmonized approach forms the core of ISO management system standards, including ISO/IEC 27001

The harmonized approach with ISMS additions



The harmonized approach with ISMS additions

Clause 6.1

6.1.1
Actions to address
risk and opportunities

The harmonized approach with ISMS additions

Clause 6.1

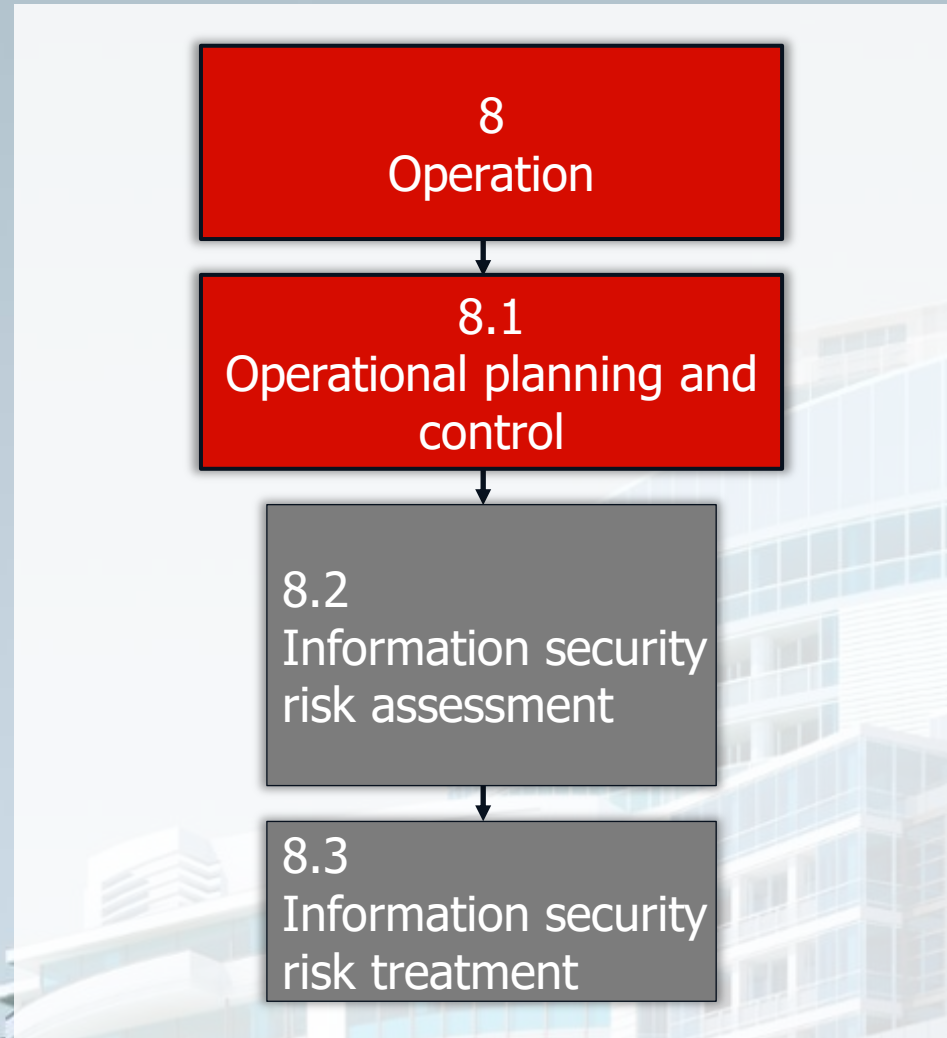
6.1 .1
Actions to address risk and opportunities

6.1.2
Information security
risk assessment

6.1.3
Information security
risk treatment

The harmonized approach with ISMS additions

Clause 8



Introduction to ISO/IEC 27001

Introduction

1 Scope

2 Normative references

3 Terms and definitions

Establish, implement, maintain and continually improve an ISMS, assessing and treating information security risks tailored to the needs of the organization

Generic requirements

Applicable to all organizations regardless of type, size or nature

All requirements in Clauses 4 to 10 are to be implemented to claim conformity

Introduction to ISO/IEC 27001

Introduction

1 Scope

2 Normative references

3 Terms and definitions

Normative references cites ISO/IEC 27000:2018 as indispensable for its application

Introduction to ISO/IEC 27001

Introduction

1 Scope

2 Normative references

3 Terms and definitions

Terms, definitions and concepts
used in ISO/IEC 27000

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Minimum Document Requirement in ISO/IEC 27001:2022

ISO/IEC 27001 clause:	Documented Requirements
4.1	-
4.2	-
4.3	Scope
4.4	-
5.1	-
5.2	Policy
5.3	-
6.1.1	-
6.1.2	Information security risk assessment process
6.1.3	Statement of Applicability Information security risk treatment plan Information security risk treatment process

Minimum Document Requirement in ISO/IEC 27001:2022

6.2	Information security objectives
6.3	-
7.1	-
7.2	Evidence of competence
7.3	-
7.4	-
7.5.1	Documented information required by this International Standard as well as documented information, determined by the organization, as being required for the effectiveness of the information security management system
7.5.2	-

Minimum Document Requirement in ISO/IEC 27001:2022

7.5.3	Documented information of external origin determined by the organization to be necessary.
8.1	Information to the extent necessary to have confidence that the processes have been carried out as planned
8.2	Results of information security risk assessments
8.3	Results of information security risk treatment
9.1	Evidence of monitoring and measurement results
9.2	Audit programme(s) Evidence of the implementation of the audit programme(s) and the audit results
9.3	Information as evidence of the results of the management reviews
10.1	-
10.2	Information of the nature of the nonconformities and any subsequent actions taken, and the results of any corrective action.

ISO/IEC 27001 clause:	<u>Process and Procedure Requirements (not necessarily documented)</u>
6.3	Change management process
7.4	Communication process
7.5	Documented information control
8.1	Processes needed to meet information security requirements Outsourced processes.
9.1	Methods for monitoring, measurement, analysis, and evaluation

-
- ภาพรวมการเปลี่ยนแปลง และเทคนิคการ implement การเปลี่ยนแปลงข้อกำหนด ISO/IEC 27001:2022 (Requirement 4-10)

ISO/IEC 27001:2022 change highlights

'International Standard' replaced with document throughout

Re-arranging of some English to allow for easier translation

Minor numbering re-structure to align with the harmonized approach

Requirement to **define your process needs** and their **interactions** as part of your ISMS

Explicit requirement to communicate organizational roles relevant to information security within in the organization



ISO/IEC 27001:2022 change highlights

Removal of reference to control objectives as they no longer exist either in **Annex A** or **ISO/IEC 27002**

New requirement to monitor information security objectives

New Clause 6.3 – Planning of changes

New requirement to ensure the organization determines **how to communicate** as part of Clause 7.4





ISO/IEC 27001:2022 change highlights

New requirements to establish **criteria for operational processes** and implementing control of the processes

Internal audit and management review clauses aligned with harmonized approach

Clause 10.1 Continual Improvement and Clause 10.2 now nonconformity and corrective action but requirements remain the same

Clause 4.4

Confidentiality

Integrity

Availability

Effective implementation of the system

Internal audit

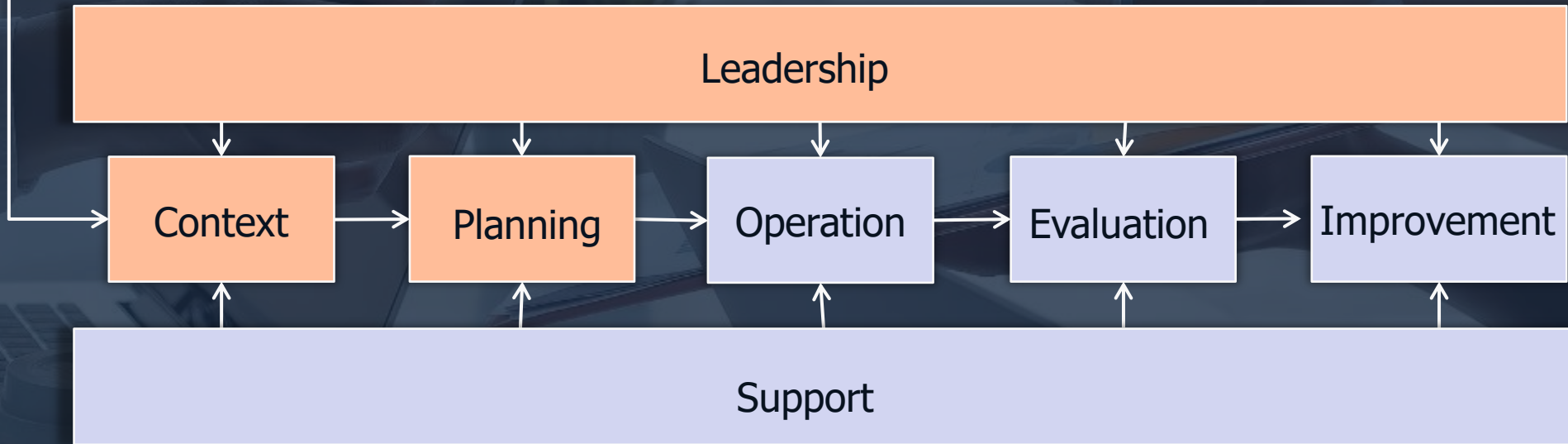
Management review

Clause 4.4

Intended outcomes

Strategic Direction

A **process** is a series of interrelating and interacting activities that use inputs to achieve an intended result



Resources Management
Process

Communication Process

Document control
Process

Intended Outcome

Context

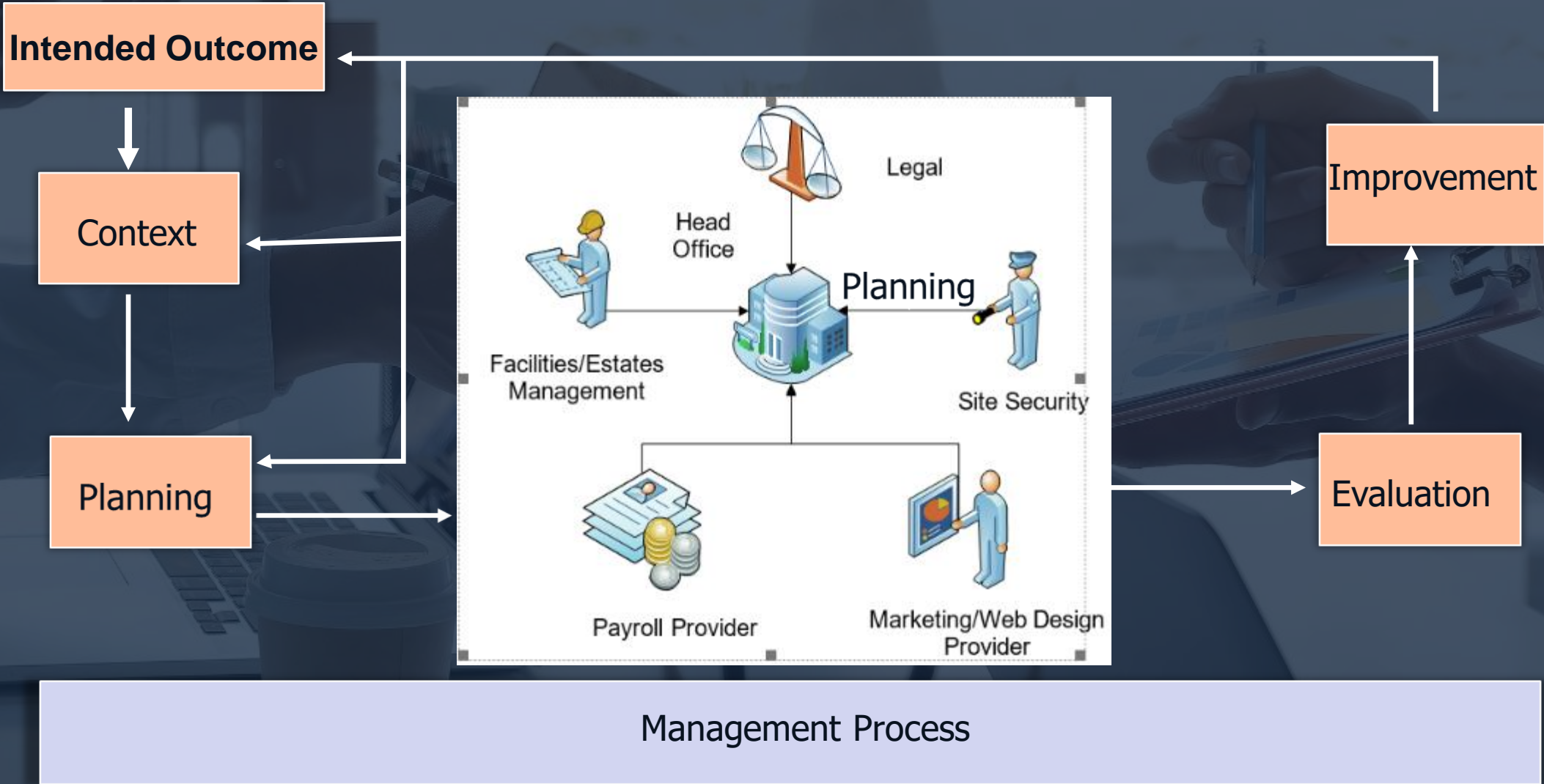
Planning



Improvement

Evaluation

Management Process





Clause 6.3: Planning of changes

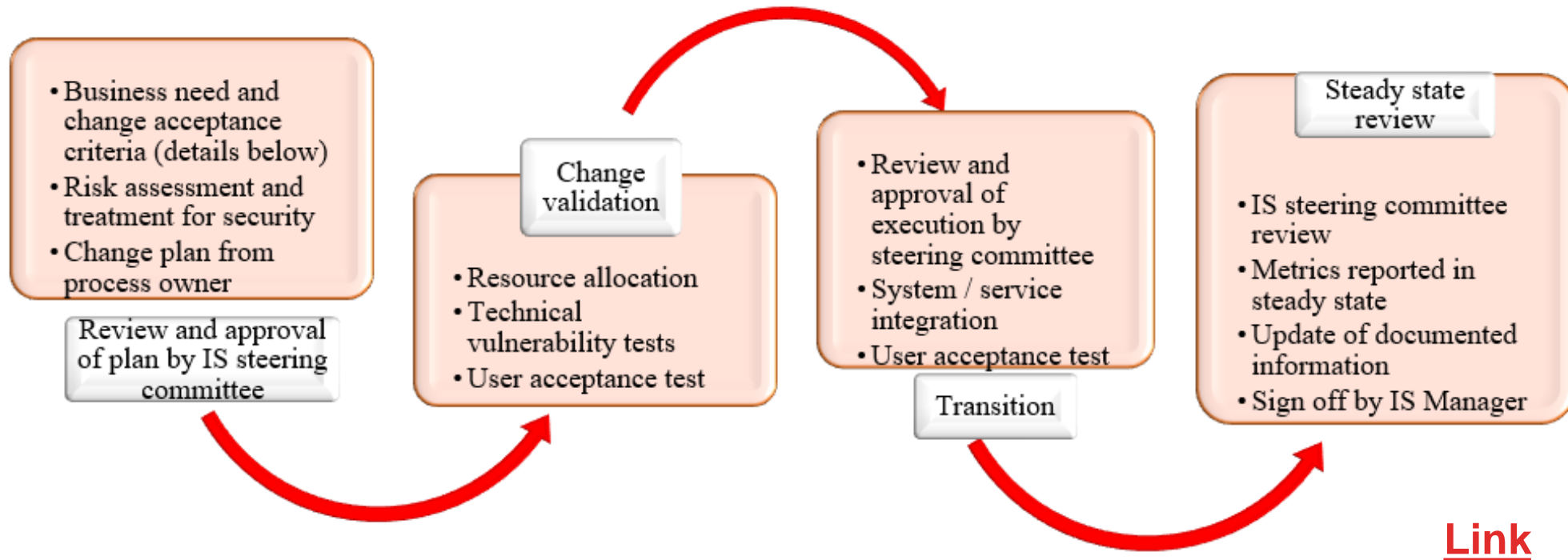
Consider the change in relevant to ISMS and implement the relevant actions



Example of planning of change

Process:

The process flow for change planning validation, execution and review is depicted below (for changes not involving any new technology platform, only some of the steps may be involved, as applicable).



-
- ภาพรวมการเปลี่ยนแปลง เทคนิคการ implement การเปลี่ยนแปลง control (Annex A)

ISO/IEC 27001:2022 Annex A

Clause 5

Organizational controls
37 controls, 34 existing, 3 new

Clause 7

Physical controls
14 controls, 13 existing, 1 new

Clause 6

People controls
8 controls, all existing

Clause 8

Technological controls
34 controls, 27 existing, 7 new

New controls

11 new controls

Control Identifier	Control Name
5.7	Threat intelligence
5.23	Information security for use of cloud services
5.30	Information and Communications Technology readiness for business continuity
7.4	Physical security monitoring
8.9	Configuration management
8.10	Information deletion
8.11	Data masking
8.12	Data leakage prevention
8.16	Monitoring activities
8.23	Web filtering
8.28	Secure coding

Updated controls

58
updated
controls

ISO/IEC 27001:2013	ISO/IEC 27001:2022	ISO/IEC 27001:2013	ISO/IEC 27001:2022	ISO/IEC 27001:2013	ISO/IEC 27001:2022
A6.1.1	5.02	A18.2.1	5.35	A09.2.3	8.02
A6.1.2	5.03	A12.1.1	5.37	A09.4.1	8.03
A7.2.1	5.04	A07.1.1	6.01	A09.4.5	8.04
A6.1.3	5.05	A07.1.2	6.02	A09.4.2	8.05
A6.1.4	5.06	A07.2.2	6.03	A12.1.3	8.06
A8.1.4	5.11	A07.2.3	6.04	A12.2.1	8.07
A8.2.1	5.12	A07.3.1	6.05	A12.3.1	8.13
A8.2.2	5.13	A13.2.4	6.06	A17.2.1	8.14
A9.2.1	5.16	A06.2.2	6.07	A12.4.4	8.17
A15.1.1	5.19	A11.1.1	7.01	A09.4.4	8.18
A15.1.2	5.20	A11.1.3	7.03	A13.1.1	8.20
A15.1.3	5.21	A11.1.4	7.05	A13.1.2	8.21
A16.1.1	5.24	A11.1.5	7.06	A13.1.3	8.22
A16.1.4	5.25	A11.2.9	7.07	A14.2.1	8.25
A16.1.5	5.26	A11.2.1	7.08	A14.2.5	8.27
A16.1.6	5.27	A11.2.6	7.09	A14.2.7	8.30
A16.1.7	5.28	A11.2.2	7.11	A14.3.1	8.33
A18.1.2	5.32	A11.2.3	7.12	A12.7.1	8.34
A18.1.3	5.33	A11.2.4	7.13		
A18.1.4	5.34	A11.2.7	7.14		

Majority of existing controls remain relevant

Many needed updating to reflect latest best practices and removal of obsolete technologies

Link between corresponding control numbers

Merged controls

24
merged
controls

ISO/IEC 27001:2013	ISO/IEC 27001:2022	ISO/IEC 27001:2013	ISO/IEC 27001:2022
A05.1.1, A05.1.2	5.01	A16.1.2, A16.1.3	6.08
A06.1.5, A14.1.1	5.08	A11.1.2, A11.1.6	7.02
A08.1.1, A08.1.2	5.09	A08.3.1, A08.3.2, A08.3.3, A11.2.5	7.10
A08.1.3, A08.2.3	5.10	A06.2.1, A11.2.8	8.01
A13.2.1, A13.2.2, A13.3.3	5.14	A12.6.1, A18.2.3	8.08
A09.1.1, A09.2.2	5.15	A12.4.1, A12.4.2, A12.4.3	8.15
A09.2.4, A09.2.5, A09.2.6	5.17	A12.5.1, A12.6.2	8.19
A09.2.2, A09.2.5, A09.2.6	5.18	A10.1.1, A10.1.2	8.24
A15.1.1, A15.1.2	5.22	A14.1.2, A14.1.3	8.26
A17.1.1, A17.1.2, A17.1.3	5.29	A14.2.8, A14.2.9	8.29
A18.1.1, A18.1.5	5.31	A12.1.4, A12.2.6	8.31
A18.2.2, A18.2.3	5.36	A12.1.2, A14.2.2, A14.2.3, A14.2.4	8.32

Merged where existing controls are inseparable or closely related

- Understanding changes to Annex A
Clauses 5 to 7

Clause 5 – Organizational controls

37 controls: 34 existing and 3 new

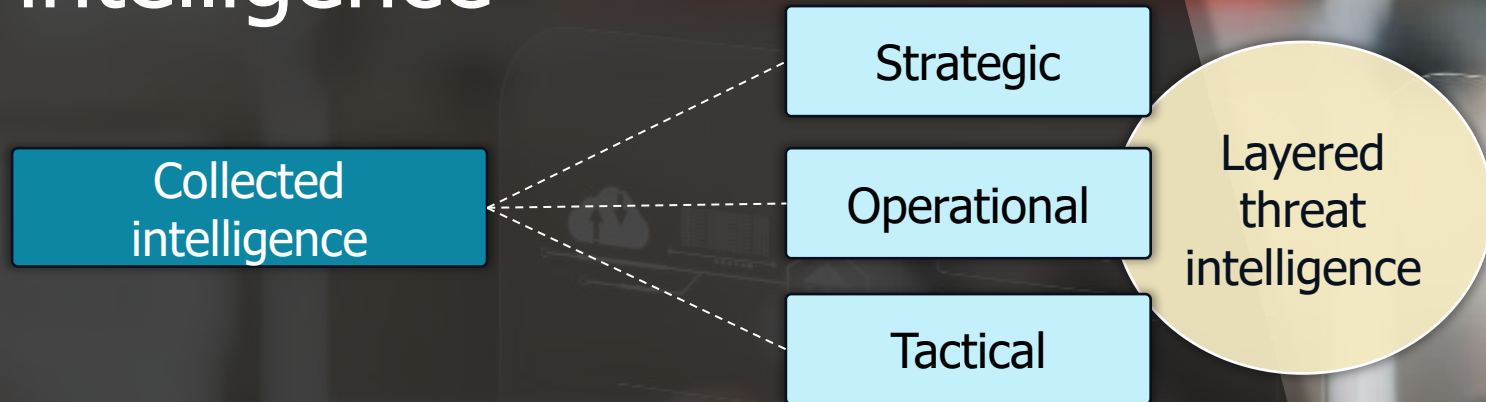
5.7 Threat intelligence

5.23 Information security for use on cloud services

5.30 ICT readiness for business continuity



Control 5.7 threat intelligence



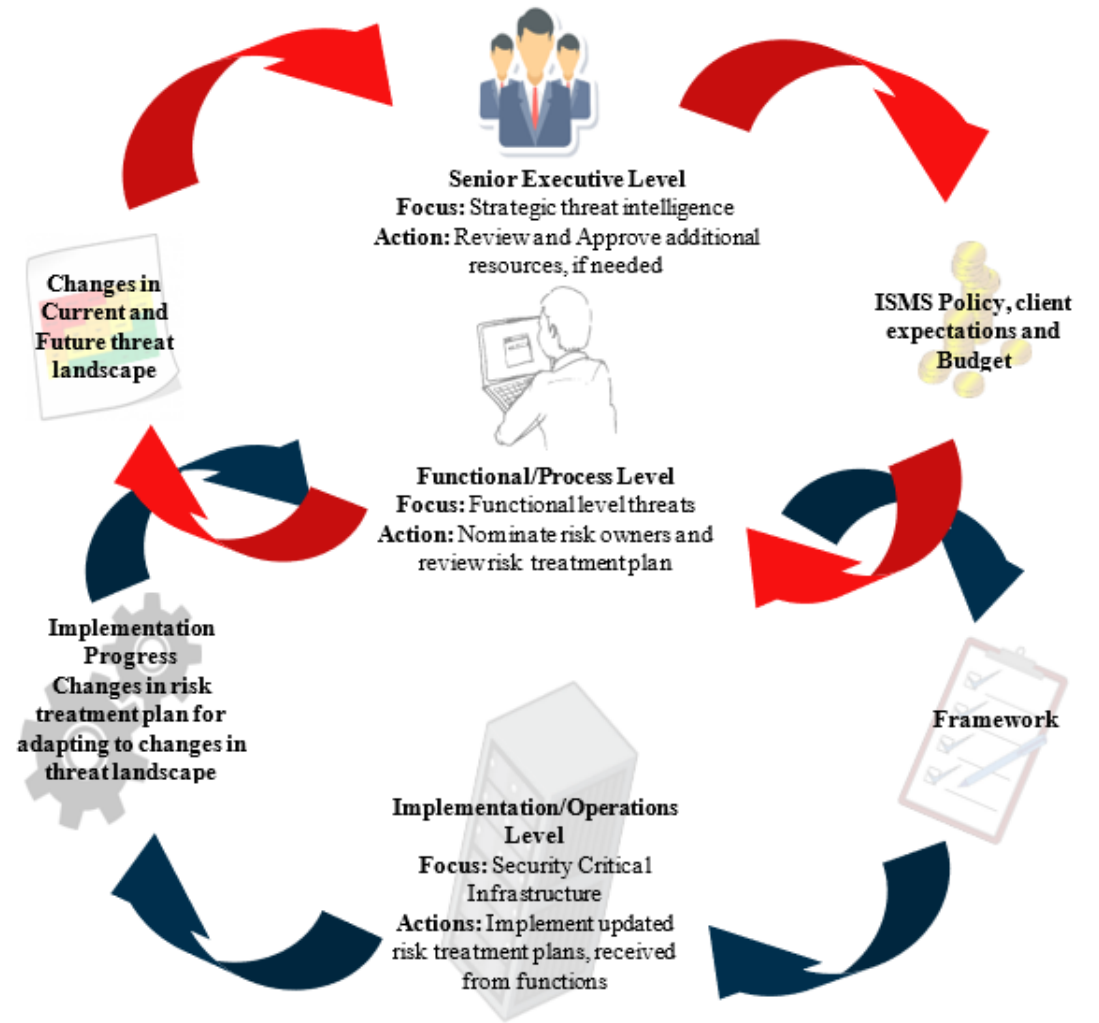
Intelligence should be relevant, insightful, contextual and actionable

Establish activities to identify, vet, select, collect, process, analyse and communicate relevant information

Consider internal and external threats




Example of threat intelligence procedure



Linkages with other processes:

1. Information security risk assessment and risk treatment process
2. Incident management process
3. Top management review of ISMS
4. Internal audit process
5. Continual improvement process



Control 5.23

Information security for use of cloud services

Establish processes for acquisition, use management and exit from cloud services

Establish and communicate a topic-specific policy

Identify all information security requirements

Responsibilities of the cloud service provider vs the organization

Manage information security risks in relation to cloud services

Control 5.30 ICT readiness for business continuity

Business Impact Analysis (BIA)

Process of analysing the impact over time of a disruption on the organization

Recovery Point Objective (RPO)

Point to which information used by an activity is restored to enable the activity to operate on resumption

Recovery Time Objective (RTO)

Period of time following an incident within which a product and service or an activity is resumed, or resources are recovered





Clause 6 and Clause 7 controls

Clause 6 - People controls
8 controls, all existing

Clause 7 - Physical controls
14 controls, 13 existing, 1 new



Control 7.4 - Physical security monitoring

Clause 6 and Clause 7 controls

Clause 6 - People controls
8 controls, all existing

Clause 7 - Physical controls
14 controls, 13 existing, 1 new



Control 7.4 - Physical security monitoring

Consider data protection laws and regulations

Alarm unoccupied areas continuously

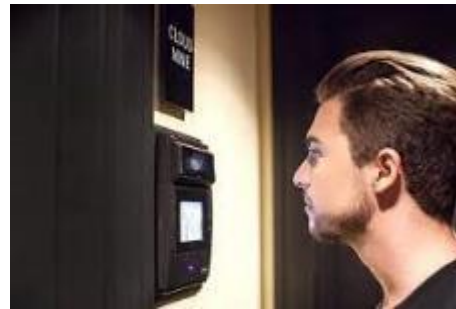


Security guard

All members of staff should know the position of monitoring systems to prevent false alarms



CCTV



Iris scanner

Infra-red technology can be used as a motion detector



Barrier gate

Critical systems should be monitored systems continuously

Monitoring systems should be tested monthly

- Understanding changes to Annex A
Clause 8

Clause 8 - Technological controls

34 controls, 27 existing, 7 new

8.9 Configuration management

8.10 Information deletion

8.11 Data masking

8.12 Data leakage prevention

8.16 Monitoring activities

8.23 Web filtering

8.28 Secure coding

Control 8.9 Configuration management

Processes and tools to enforce defined configurations of hardware, software, services and networks

Use of standard templates and databases to manage configurations

Configuration monitoring utilizing system management tools

Integration with asset management

Control 8.10 Information deletion

Prevent unnecessary exposure of sensitive information

Consider deletion methods

Record deletion

Consider third-parties storing information on the organization's behalf

Information Deletion policy:

60

- Configuring systems to securely destroy information when no longer required (e.g. after a defined period subject to the topic-specific policy on data retention or by subject access request)
- Deleting obsolete versions, copies and temporary files wherever they are located
- Using approved, secure deletion software to permanently delete information to help ensure information cannot be recovered by using specialist recovery or forensic tools
- Using approved, certified providers of secure disposal services
- Using disposal mechanisms appropriate for the type of storage media being disposed of (e.g. degaussing hard disk drives and other magnetic storage media)
- Consider certain devices such as smart phones where secure deletion can only be achieved through destruction or use of factory settings - restore or similar function embedded with the device itself.

Information Deletion Guideline

NIST Special Publication 800-88 (Guidelines for Media Sanitization)

NATIONAL SECURITY AGENCY CENTRAL SECURITY SERVICE NSA/CSS POLICY MANUAL 9-12

- guidance for sanitization of information system (IS) storage devices for disposal or recycling in accordance with NSA/CSS Policy Statement 9-12

Recommended from <https://ico.org.uk/>

- Physical destruction: This involves physically destroying the media so that it can no longer be used.
- Secure deletion software: This involves using software to overwrite data one or more times.
- Restore to factory settings: Many devices offer a function to 'Restore to factory settings'. This will return the device to the state in which you bought it.
- Send to a specialist: There are many organisations which will securely delete data from a range of devices and types of media. These organisations will destroy or overwrite your data on your behalf.
- Formatting: Formatting media recreates the data structures and file system.

Control 8.11 data masking

Limit the exposure of sensitive data including PII

Consider the use of different data masking techniques to disguise the true data, including the identity of PII principals

Consider legal, regulatory and contractual obligations when considering techniques



Masking Technique	Definition
Data encryption	The process of converting information or data into a code.
Data scrambling	Characters are reorganized in random order, replacing the original content.
Nulling out	Data appears missing when viewed by an unauthorized user.
Value variance	Original data values are replaced by a function, such as the difference between the lowest and highest value in a series.
Data substitution	Data values are substituted with fake, but realistic, alternative values.
Data shuffling	Data values are switched within the same dataset. Data is rearranged in each column using a random sequence.
Pseudonymisation	Replaces the identifying information with an alias.
Anonymisation	Irreversibly alters information in such a way that the subject can no longer be identified directly or indirectly.
Obfuscation	Make the information unclear or unintelligible.



Control 8.12 Data leakage prevention

Apply to systems, networks and any other devices that process, store or transmit sensitive information

Identify and classify the information, monitor channels and prevent information from leaking

Use data leakage prevention tools

What are you protecting the information against?

Data Leakage Prevention

- What information might an organization wish to protect against leakage?
 - PII
 - Pricing models
 - Research and development information
 - Proprietary information
- What channels might be at risk from data leakage?
 - Email
 - File transfers
 - Mobile devices
 - Portable storage devices
 - Etc.
- How might an organization prevent data leakage?
 - Quarantining
- What might be the key motivators of an interested party wishing to obtain information through data leakage
 - Geopolitical
 - Human
 - Financial
 - Commercial advantage

Control 8.16

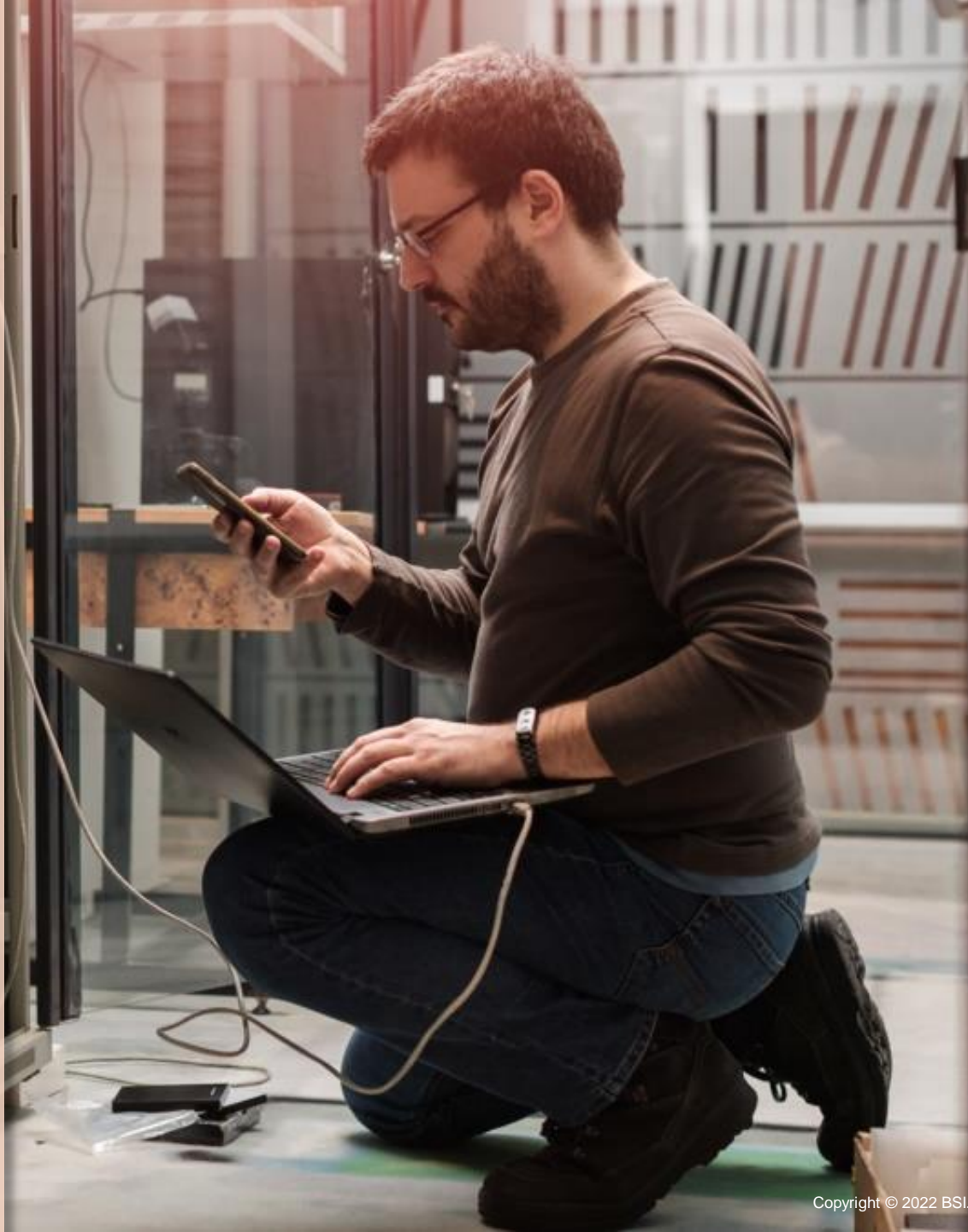
Monitoring activities

Monitor network systems and applications for anomalous behaviour and evaluate potential information security incidents

Use monitoring tools for continuous monitoring

Have the ability to adapt to differing threats

Alert function capability to allow abnormal events to be communicated to relevant interested parties



Control 8.23 Web filtering

Protect systems being compromised by malware and access to unauthorized web resources

Identify types of websites personnel should or should not have access to

Establish rules for safe and appropriate use of online resources

Provide training to personnel on secure and appropriate use of online resources



Control 8.28 Secure coding

Ensure software is written securely to reduce potential information security vulnerabilities

Establish a minimum secure baseline including third-parties and open source software

Keep up to date on real world software threats

Consider the whole coding life cycle including reuse

- Transitioning your ISO/IEC 27001:2013 ISMS

ISO/IEC 27001:2022 transition timeline

31st October 2022 start of 3 years transition period to October 2025

2022

ISO/IEC 27001:2022 released

2023

New and existing certificates can still be assessed to ISO/IEC 27001:2013

2024

No initial audits to be conducted after **31st October 2023**

2025

All ISO/IEC 27001:2013 certificates shall expire or be withdrawn no later than **31st October 2025**





Transition audit

During a routine surveillance audit

At your re-certification audit

Special audit

All audits require additional time to complete

Additional time calculated on an individual basis, based on size and complexity of your scope

Next steps

- Access a copy of ISO/IEC 27001:2022 and where necessary ISO/IEC 27002:2022
- Carry out a gap analysis of your ISMS against the new requirements and Annex A
- Implement and changes necessary, gather evidence of effective implementation
- Update your SoA to reflect the new Annex A and your existing controls, justifying their inclusion and exclusion.
- Work with your client manager on a transition timeline for your ISMS

● Thank you for participating

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