

- a) information security policy, objectives, and activities aligned with objectives
- b) an approach and framework for designing, implementing, monitoring, maintaining, and improving information security consistent with the organizational culture
- c) visible support and commitment from all levels of management, especially top management
- d) an understanding of information asset protection requirements achieved through the application of information security risk management (see ISO/IEC 27005)
- e) an effective information security awareness, training and education programme, informing all employees and other relevant parties of their information security obligations set forth in the information security policies, standards, etc., and motivating them to act accordingly
- f) an effective information security incident management process
- g) an effective business continuity management approach
- h) a measurement system used to evaluate performance in information security management and feedback suggestions for improvement

## ISMS critical success factors

The aim of continual improvement of an ISMS is to increase the probability of achieving objectives concerning the preservation of the confidentiality, availability and integrity of information

The focus of continual improvement is seeking opportunities for improvement and not assuming that existing management activities are good enough or as good as they can

- a) analysing and evaluating the existing situation to identify areas for improvement
- b) establishing the objectives for improvement
- c) searching for possible solutions to achieve the objectives
- d) evaluating these solutions and making a selection
- e) implementing the selected solution
- f) measuring, verifying, analysing and evaluating results of the implementation to determine that the objectives have been met
- g) formalizing changes

## Actions for improvement

- a) identify information assets and their associated information security requirements
- b) assess information security risks and treat information security risks
- c) select and implement relevant controls to manage unacceptable risks
- d) monitor, maintain and improve the effectiveness of controls associated with the organization's information assets

## ISMS Implementation

- a) satisfy the information security requirements of customers and other stakeholders
- b) improve an organization's plans and activities
- c) meet the organization's information security objectives
- d) comply with regulations, legislation and industry mandates
- e) manage information assets in an organized way that facilitates continual improvement and adjustment to current organizational goals

## Management system allows an organization to:

- a) achieve greater assurance that its information assets are adequately protected against threats on a continual basis
- b) maintain a structured and comprehensive framework for identifying and assessing information security risks, selecting and applying applicable controls, and measuring and improving their effectiveness
- c) continually improve its control environment
- d) effectively achieve legal and regulatory compliance

## The successful adoption of an ISMS allowing an organization to:

## Benefits

An ISMS consists of the policies, procedures, guidelines, and associated resources and activities, collectively managed by an organization, in the pursuit of protecting its information assets

An ISMS is a systematic approach for establishing, implementing, operating, monitoring, reviewing, maintaining and improving an organization's information security to achieve business objectives.

It is based on a risk assessment and the organization's risk acceptance levels designed to effectively treat and manage risks

## What is an ISMS?

Analysing requirements for the protection of information assets and applying appropriate controls to ensure the protection of these information assets

- a) awareness of the need for information security
- b) assignment of responsibility for information security
- c) incorporating management commitment and the interests of stakeholders
- d) enhancing societal values

## Contributes to the successful implementation of an ISMS

- e) risk assessments determining appropriate controls to reach acceptable levels of risk
- f) security incorporated as an essential element of information networks and systems
- g) active prevention and detection of information security incidents
- h) ensuring a comprehensive approach to information security management
- i) continual reassessment of information security and making of modifications as appropriate

## Other

## Intro

### ISO/IEC 27000:2018 Information technology — Security techniques — Information security management systems — Overview and vocabulary

- It provides the overview of information security management systems (ISMS)
- It also provides terms and definitions commonly used in the ISMS family of standards

- Information Security** — Preservation of confidentiality, integrity and availability of information  
Note: In addition, other properties, such as authenticity, accountability, non-repudiation and reliability can also be involved
- The CIA Triad**
  - Confidentiality** — Property that information is not made available or disclosed to unauthorized individuals, entities, or processes
  - Integrity** — Property of accuracy and completeness
  - Availability** — Property of being accessible and usable on demand by an authorized entity
- Management system** — Set of interrelated or interacting elements of an organization to establish policies and objectives and processes to achieve those objectives
- Governance of information security** — System by which an organization's information security activities are directed by and controlled
- Requirement** — Need or expectation that is stated, generally implied or obligatory
- Objective** — Result to be achieved
- Interested party / Stakeholder** — Person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity
- Policy** — Intentions and direction of an organization, as formally expressed by its top management
- Control** — Measure that is modifying risk  
Note: Controls include any process, policy, device, practice, or other actions which modify risk
- Control objective** — Statement describing what is to be achieved as a result of implementing controls
- Process** — Set of interrelated or interacting activities which transforms inputs into outputs
- Process approach** — The application of a system of processes within an organization, together with the identification and interactions of these processes, and their management
- Risk** — Effect of uncertainty on objectives  
Note: Risk is often expressed in terms of a combination of the consequences of an event and the associated "likelihood" of occurrence
- Continual improvement** — Recurring activity to enhance performance
- Nonconformity** — Non-fulfilment of a requirement
- Correction** — Action to eliminate a detected nonconformity
- Corrective action** — Action to eliminate the cause of a nonconformity and to prevent recurrence
- Effectiveness** — Extent to which planned activities are realized and planned results achieved
- Performance** — Measurable result

## Terms

## ISO 27000:2018 ISMS. Overview and vocabulary

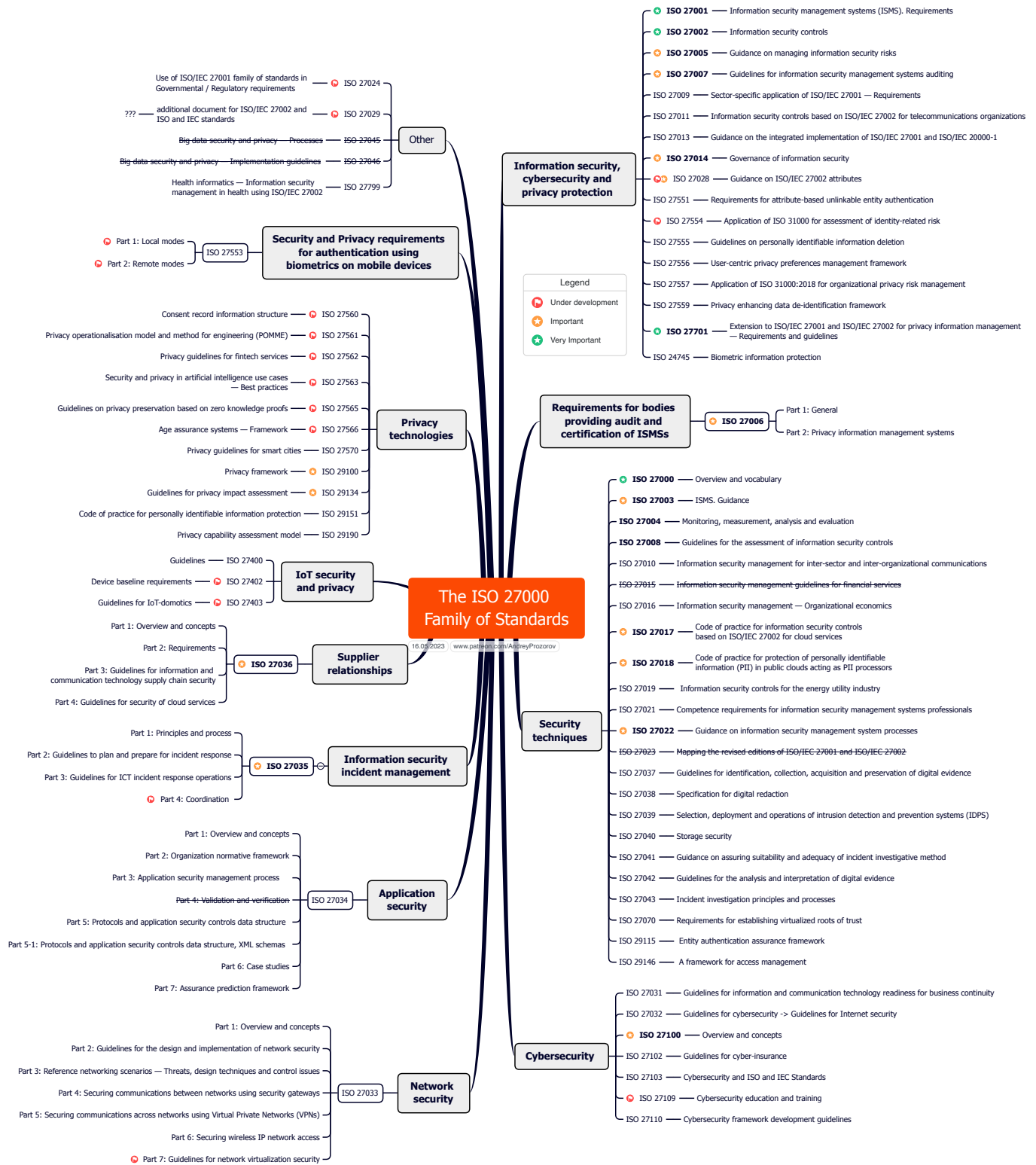
1.0 10.07.2023 [www.ispasset.com/AndreyProzorov](https://www.ispasset.com/AndreyProzorov)

## ISMS family of standards

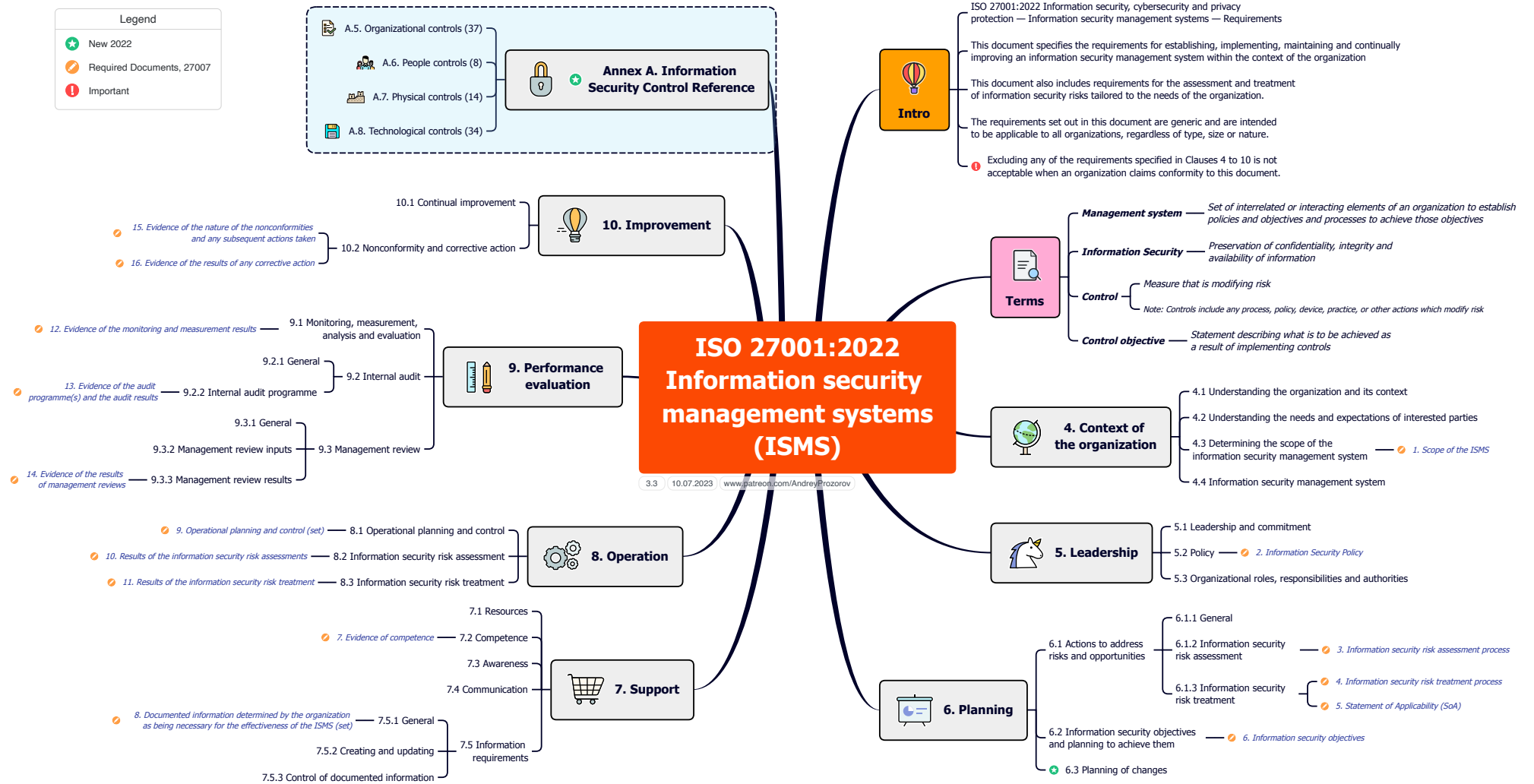
- Vocabulary — ISO 27000
- Requirements
  - ISO 27001 — ISMS. Requirements
  - ISO 27006 / 27009
- Guidelines
  - ISO 27002 — Information Security Controls
  - ISO 27003 — ISMS. Guidance
  - ISO 27004 — Monitoring, measurement, analysis and evaluation
  - ISO 27005 — Guidance on managing information security risks
  - ISO 27007 / 27008 / 27013 / 27014 / 27016 / 27021
- Sector-specific standards — ISO 27010 / 27011 / 27017 / 27018 / 27019
- Control-specific standards — ISO 2703x / 2704x

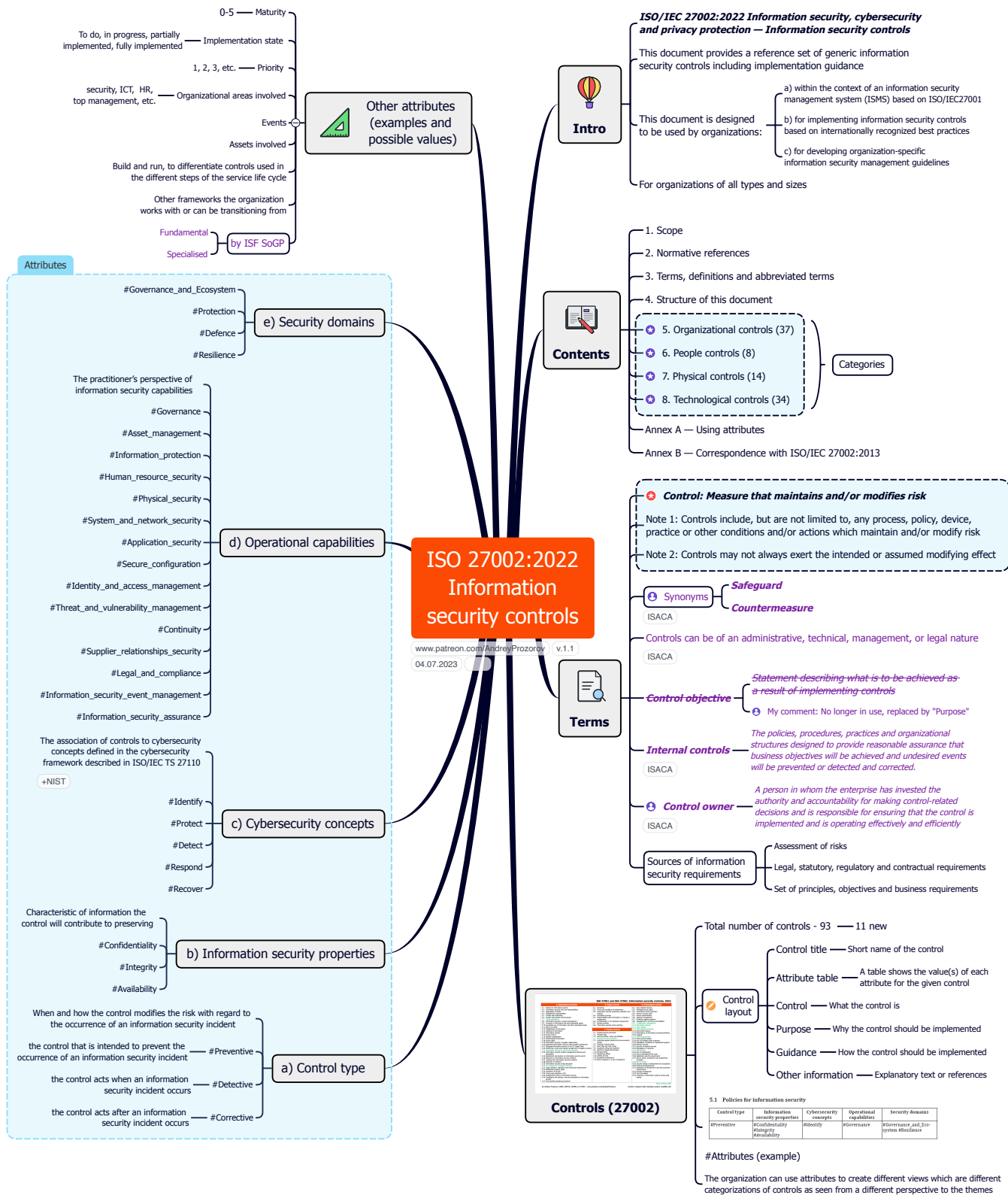
## General

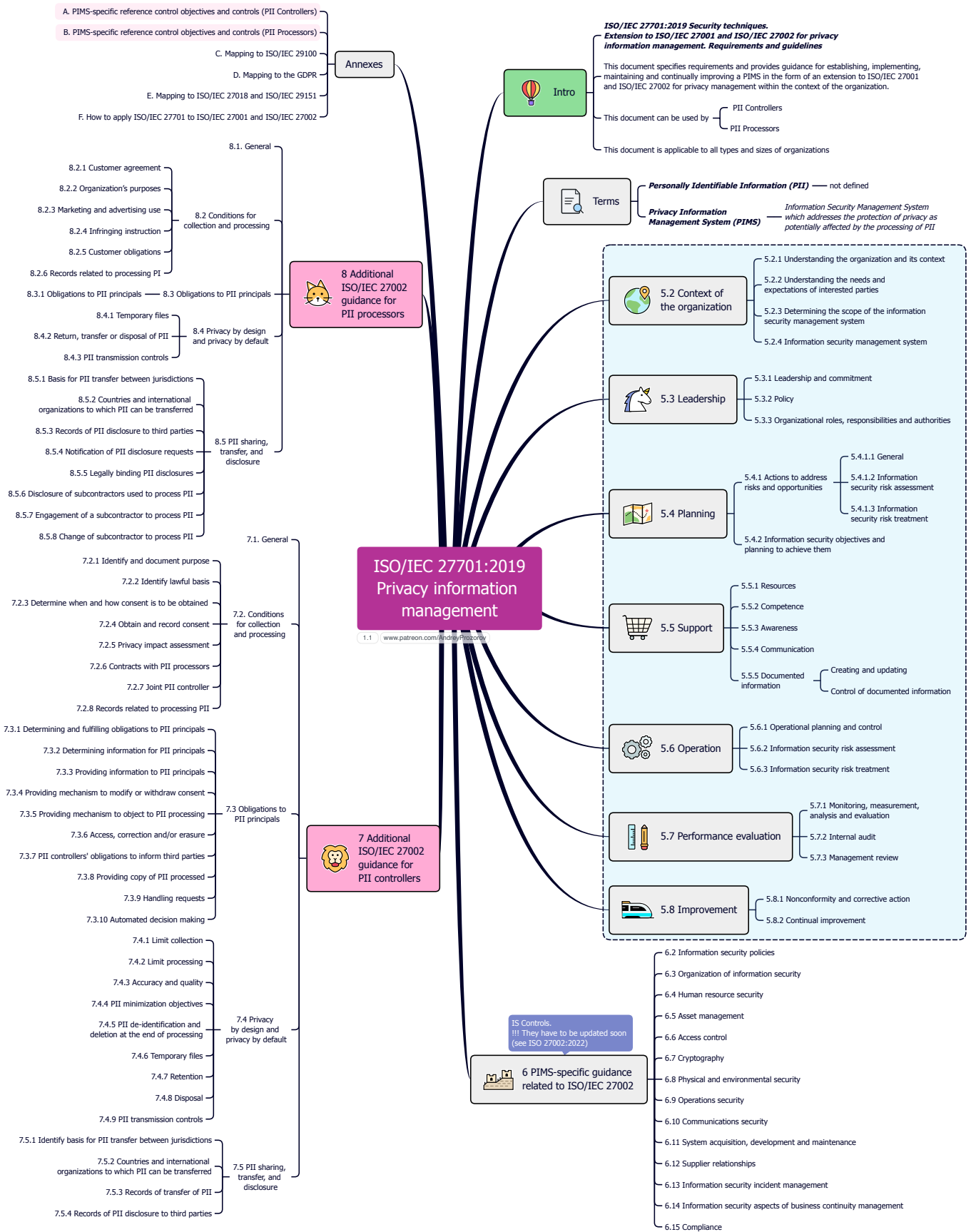
- Organizations of all types and sizes:**
  - a) collect, process, store, and transmit information
  - b) recognize that information, and related processes, systems, networks and people are important assets for achieving organization objectives
  - c) face a range of risks that can affect the functioning of assets
  - d) address their perceived risk exposure by implementing information security controls
- The term information security is generally based on information being considered as an asset which has a value requiring appropriate protection, for example, against the loss of availability, confidentiality and integrity
- Enabling accurate and complete information to be available in a timely manner to those with an authorized need is a catalyst for business efficiency.
- Coordinated activities directing the implementation of suitable controls and treating unacceptable information security risks are generally known as elements of information security management.
- Organizations need to:**
  - a) monitor and evaluate the effectiveness of implemented controls and procedures
  - b) identify emerging risks to be treated
  - c) select, implement and improve appropriate controls as needed
- Each organization needs to establish its policy and objectives for information security and achieve those objectives effectively by using a management system



Legend	
★	New 2022
🔗	Required Documents, 27007
❗	Important







# ISO 27001:2022. ISMS Requirements and Information security controls

5. Organizational controls	6. People controls	8. Technological controls
<ul style="list-style-type: none"> <li>5.1. Policies for information security</li> <li>5.2. Information security roles and responsibilities</li> <li>5.3. Segregation of duties</li> <li>5.4. Management responsibilities</li> <li>5.5. Contact with authorities</li> <li>5.6. Contact with special interest groups</li> <li>5.7. Threat intelligence</li> <li>5.8. Information security in project management</li> <li>5.9. Inventory of information and other associated assets</li> <li>5.10. Acceptable use of information and other associated assets</li> <li>5.11. Return of assets</li> <li>5.12. Classification of information</li> <li>5.13. Labelling of information</li> <li>5.14. Information transfer</li> <li>5.15. Access control</li> <li>5.16. Identity management</li> <li>5.17. Authentication information</li> <li>5.18. Access rights</li> <li>5.19. Information security in supplier relationships</li> <li>5.20. Addressing information security within supplier agreements</li> <li>5.21. Managing information security in the ICT supply chain</li> <li>5.22. Monitoring, review and change management of supplier services</li> <li>5.23. Information security for use of cloud services</li> <li>5.24. Information security incident management planning and preparation</li> <li>5.25. Assessment and decision on information security events</li> <li>5.26. Response to information security incidents</li> <li>5.27. Learning from information security incidents</li> <li>5.28. Collection of evidence</li> <li>5.29. Information security during disruption</li> <li>5.30. ICT readiness for business continuity</li> <li>5.31. Legal, statutory, regulatory and contractual requirements</li> <li>5.32. Intellectual property rights</li> <li>5.33. Protection of records</li> <li>5.34. Privacy and protection of PII</li> <li>5.35. Independent review of information security</li> <li>5.36. Compliance with policies, rules and standards for information security</li> <li>5.37. Documented operating procedures</li> </ul>	<ul style="list-style-type: none"> <li>6.1. Screening</li> <li>6.2. Terms and conditions of employment</li> <li>6.3. Information security awareness, education and training</li> <li>6.4. Disciplinary process</li> <li>6.5. Responsibilities after termination or change of employment</li> <li>6.6. Confidentiality or non-disclosure agreements</li> <li>6.7. Remote working</li> <li>6.8. Information security event reporting</li> </ul>	<ul style="list-style-type: none"> <li>8.1. User endpoint devices</li> <li>8.2. Privileged access rights</li> <li>8.3. Information access restriction</li> <li>8.4. Access to source code</li> <li>8.5. Secure authentication</li> <li>8.6. Capacity management</li> <li>8.7. Protection against malware</li> <li>8.8. Management of technical vulnerabilities</li> <li>8.9. Configuration management</li> <li>8.10. Information deletion</li> <li>8.11. Data masking</li> <li>8.12. Data leakage prevention</li> <li>8.13. Information backup</li> <li>8.14. Redundancy of information processing facilities</li> <li>8.15. Logging</li> <li>8.16. Monitoring activities</li> <li>8.17. Clock synchronization</li> <li>8.18. Use of privileged utility programs</li> <li>8.19. Installation of software on operational systems</li> <li>8.20. Network security</li> <li>8.21. Security of network services</li> <li>8.22. Segregation of networks</li> <li>8.23. Web filtering</li> <li>8.24. Use of cryptography</li> <li>8.25. Secure development life cycle</li> <li>8.26. Application security requirements</li> <li>8.27. Secure system architecture and engineering principles</li> <li>8.28. Secure coding</li> <li>8.29. Security testing in development and acceptance</li> <li>8.30. Outsourced development</li> <li>8.31. Separation of development, test and production environments</li> <li>8.32. Change management</li> <li>8.33. Test information</li> <li>8.34. Protection of information systems during audit testing</li> </ul>
	<b>7. Physical controls</b> <ul style="list-style-type: none"> <li>7.1. Physical security perimeter</li> <li>7.2. Physical entry</li> <li>7.3. Securing offices, rooms and facilities</li> <li>7.4. Physical security monitoring</li> <li>7.5. Protecting against physical and environmental threats</li> <li>7.6. Working in secure areas</li> <li>7.7. Clear desk and clear screen</li> <li>7.8. Equipment siting and protection</li> <li>7.9. Security of assets off-premises</li> <li>7.10. Storage media</li> <li>7.11. Supporting utilities</li> <li>7.12. Cabling security</li> <li>7.13. Equipment maintenance</li> <li>7.14. Secure disposal or re-use of equipment</li> </ul>	
	<b>ISMS Requirements (ISO 27001)</b> <ul style="list-style-type: none"> <li>4. Context of the organization <ul style="list-style-type: none"> <li>4.1 Understanding the organization and its context / 4.2 Understanding the needs and expectations of interested parties / 4.3 Determining the scope of the ISMS / 4.4 ISMS</li> </ul> </li> <li>5. Leadership <ul style="list-style-type: none"> <li>5.1 Leadership and commitment / 5.2 Policy / 5.3 Organizational roles, responsibilities and authorities</li> </ul> </li> <li>6. Planning <ul style="list-style-type: none"> <li>6.1 Actions to address risks and opportunities / 6.2 Information security objectives and planning to achieve them / 6.3 Planning of changes</li> </ul> </li> <li>7. Support <ul style="list-style-type: none"> <li>7.1 Resources / 7.2 Competence / 7.3 Awareness / 7.4 Communication / 7.5 Documented information</li> </ul> </li> <li>8. Operation <ul style="list-style-type: none"> <li>8.1 Operational planning and control / 8.2 Information security risk assessment / 8.3 Information security risk treatment</li> </ul> </li> <li>9. Performance evaluation <ul style="list-style-type: none"> <li>9.1 Monitoring, measurement, analysis and evaluation / 9.2 Internal audit / 9.3 Management review</li> </ul> </li> <li>10. Improvement <ul style="list-style-type: none"> <li>10.1 Continual improvement / 10.2 Nonconformity and corrective action</li> </ul> </li> </ul>	

\*New controls, 2022