Frameworks and ISO Standards

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Session Description

As global commerce and the IT that powers communication and business continue to grow, the frameworks and standards that protect the organization's stakeholders have become increasingly critical. This session will give you an overview of these frameworks and standards while providing you with the opportunity to explore COBIT 5, CMMI, and ITIL, in addition to ISO management, audit, and process assessment standards. *(Experience Level: Advanced)*

Speaker Background

Robert Meyer has been a member of itSMF USA for the past eight years, and has served as president of the Ohio Valley LIG since 2015. A highly decorated ITSM professional, Robert is an expert at assessing the relationships between frameworks, including ITIL, COBIT 5, CMMI, and the US federal regulations. Robert also holds ISACA's Certified Information Systems Auditor credential.
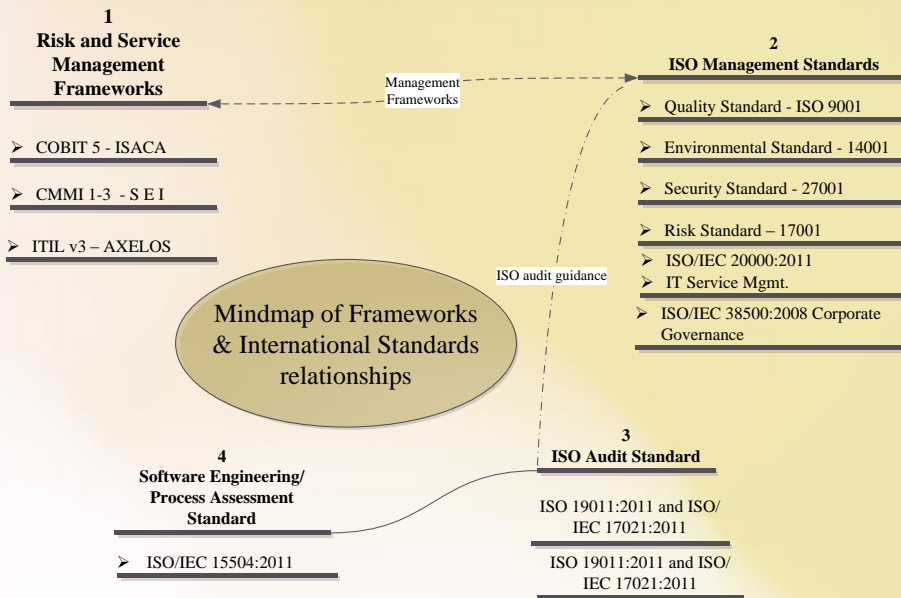
Frameworks and ISO Standards

Robert A. Meyer

Frameworks and ISO Standards

1. Mindmap
2. Literature Review
3. Framework publications and revisions
4. ISO – by the numbers
5. ISO Standards
   1. Principles
   2. Quality Management Principles
   3. Audit Standards
   4. Process Maturity Standards
6. Discussion

Slide 1

1
Risk and Service Management Frameworks

➤ COBIT 5 - ISACA

➤ CMMI 1-3 - S E I

➤ ITIL v3 – AXELOS

Management Frameworks

2
ISO Management Standards

➤ Quality Standard - ISO 9001

➤ Environmental Standard - 14001

➤ Security Standard - 27001

➤ Risk Standard – 17001

➤ ISO/IEC 20000:2011
➤ IT Service Mgmt.

➤ ISO/IEC 38500:2008 Corporate Governance

Mindmap of Frameworks & International Standards relationships

ISO audit guidance

4
Software Engineering/ Process Assessment Standard

➤ ISO/IEC 15504:2011

3
ISO Audit Standard

ISO 19011:2011 and ISO/ IEC 17021:2011

ISO 19011:2011 and ISO/ IEC 17021:2011

Slide 2

Summary of Frameworks Literature Review

Publications in Searched Categories	Scholarly Journals	Trade Journals	Dissertations	Books	Government Documents
CMMI	247	93	236	222	83
COBIT	133	23	93	157	5
ITIL	59	6	71	252	6

Framework publication and revision dates

Organizations	Title	Introduced	Prior Updates	Major Revision	Latest Release	Year
SEI	CMMI-SVC	1987	1997, 2002	V1.2 2006	V1.3	2012
ISACA	COBIT	1996	1998, 2003, 2005	COBIT4.1 2007	COBIT5	2012
APMG	ITIL	1988	2007	V3	ITILV3r	2011

#Numbers

ISO strategic direction 2016-2020

- Road Maps – published every 5 years

ISO and developing countries

- Three-quarters of ISO members are from developing countries
- Administered at the ISO Central Secretariat (ISO/CS)
- Key Outcome is to support the development or strengthening of the national quality infrastructure
- Benefit – Contribute access to
    - World markets
    - Technical progress
    - Sustainable development

ISO Management Standards

- Quality management standard: ISO 9001:2015 (QMS, ISO 9001) -
- Environmental management standard: ISO 14001:2004 (EMS, ISO 14001)
- Food safety management system (FSMS, ISO 22000)
- Energy management system (EnMS, ISO 50001)
- Information Technology Service Management: ISO/IEC 20000-1:2011
- Information Security Management Standard: ISO/IEC 27001:2005
- Risk Management Standard: ISO 31000:2009
- Corporate Governance Management Standard: ISO/IEC 38500:2008

ISO 9000 - Quality management

Standards in the ISO 9000 family include:

- ISO 9001:2015 - sets out the requirements of a quality management system

- ISO 9000:2015 - covers the basic concepts and language

- ISO 9004:2009 - focuses on how to make a quality management system more efficient and effective

- ISO 19011:2011 - sets out guidance on internal and external audits of quality management systems.

ISO/IEC 20000 - Information technology -- Service management

- ISO/IEC 20000-1:2011
  - Information technology -- Service management -- Part 1: Service management system requirements
- ISO/IEC 20000-2:2012
  - Information technology -- Service management -- Part 2: Guidance on the application of service management systems
- ISO/IEC 20000-3:2012
  - Information technology -- Service management -- Part 3: Guidance on scope definition and applicability of ISO/IEC 20000-1
- ISO/IEC TR 20000-4:2010
  - Information technology -- Service management -- Part 4: Process reference model

ISO/IEC 20000 - Information technology -- Service management

- ISO/IEC TR 20000-5:2013
  - Information technology -- Service management -- Part 5: Exemplar implementation plan for ISO/IEC 20000-1
- ISO/IEC TR 20000-9:2015
  - Information technology -- Service management -- Part 9: Guidance on the application of ISO/IEC 20000-1 to cloud services
- ISO/IEC TR 20000-10:2015
  - Information technology -- Service management -- Part 10: Concepts and terminology
- ISO/IEC TR 20000-11:2015
  - Information technology -- Service management -- Part 11: Guidance on the relationship between ISO/IEC 20000-1:2011 and service management frameworks: ITIL®

IT service management - ISO/IEC 20000 eases transition to cloud computing for Orange

- Cloud computing – the delivery of computation, software applications, data access, management and storage resources "from the cloud", i.e from infrastructure at a remote location, has grown into a multi-billion euro market since its birth in 2007.

- Finding a global information and communications technology (ICT) provider certified to ISO/IEC 20000-1:2011, Information technology – Service management – Part 1: Service management system requirements, is one way to mitigate the doubts and fears of organizations evaluating their entrée into the world of cloud computing.

Principle defined

- A basic belief, theory or rule that has a major influence on the way in which something is done.

- " Quality management principles " are a set of fundamental beliefs, norms, rules and values that are accepted as true and can be used as a basis for quality management.
  - Statement
  - Rationale
  - Key Benefits
  - Actions you can take

Quality management principles

- QMP 1 – Customer focus
- QMP 2 – Leadership
- QMP 3 – Engagement of people
- QMP 4 – Process approach
- QMP 5 – Improvement
- QMP 6 – Evidence-based decision making
- QMP 7 – Relationship management

ISO Conformity Assessment and Audit Standards

- **ISO/IEC TS 17021-4:2013**
  - Conformity assessment -- Requirements for bodies providing audit and certification of management systems -- Part 4: Competence requirements for auditing and certification of event sustainability management systems

- **ISO/IEC TS 17021-5:2014**
  - Conformity assessment -- Requirements for bodies providing audit and certification of management systems -- Part 5: Competence requirements for auditing and certification of asset management systems

- **ISO/IEC TS 17021-6:2014**
  - Conformity assessment -- Requirements for bodies providing audit and certification of management systems -- Part 6: Competence requirements for auditing and certification of business continuity management systems

- **ISO/IEC TS 17021-7:2014**
  - Conformity assessment -- Requirements for bodies providing audit and certification of management systems -- Part 7: Competence requirements for auditing and certification of road traffic safety management systems

- **ISO / IEC 17021:2011**
  - Conformity assessment -- Requirements for bodies providing audit and certification of management systems -- Part 7: Competence requirements for auditing and certification of road traffic safety management systems

ISO Conformity Assessment and Audit Standards

- **ISO 50003:2014**
  - Energy management systems -- Requirements for bodies providing audit and certification of energy management systems
- **ISO 19011:2011**
  - Guidelines for auditing management systems

ISO Process Maturity Standard

- **ISO/IEC 15504-3:2004**
  - Information technology -- Process assessment -- Part 3: Guidance on performing an assessment
- **ISO/IEC 15504-4:2004**
  - Information technology -- Process assessment -- Part 4: Guidance on use for process improvement and process capability determination

Multiple management standards

- Leveraging integration

Conclusion

- Relationships

References

- ISO Homepage - http://www.iso.org/iso/home.html
- ISO Figures - http://www.iso.org/iso/home/about/iso-in-figures.htm
- Strategic Plans
    - http://www.iso.org/iso/iso_strategic_plan_2011-2015.pdf
    - http://www.iso.org/iso/iso_strategy_2016-2020.pdf
- Quality Management principles - http://www.iso.org/iso/pub100080.pdf
- http://www.iso.org/iso/home/news_index/news_archive/news.htm?refid=Ref1577
- ISO Standards catalogue - http://www.iso.org/iso/home/store/catalogue_ics.htm

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