

Availability: ITIL and ISO

Summary

In the work of the Availability Working Group, we¹ have often referred to ITIL² as a defacto standard for describing key activities in IT operations and maintenance. RoundTables³ have proposed building on ITIL to cover the availability/Service Resilience of complex tightly coupled systems.

On investigation, we have understood that there are no mechanisms or plans to review or adapt ITIL to reflect the changing IT operational environment.

We are also aware of ISO standards in this area. ISO/IEC 2000⁴ on IT service management is under ongoing revision, most recently on the use of Agile and DevOps in a service management system. BSI⁵ offers training linked to ISO standards.

This paper recommends that we explore BCS links to relevant ISO technical committees to pursue the Problem Anticipation requirement for complex tightly coupled systems.

Background

In the work of the Availability Working Group, we have often referred to ITIL⁶ as a defacto standard for describing key activities in IT operations and maintenance. During the Nine Banks Round Table⁷, it was proposed that we seek

¹ In this text and others in the series of ITLF Availability Papers, “we” refers to the Availability/Service Resilience Working Group of the IT Leaders Forum of the BCS – the Chartered Institute for IT, see <https://www.bcs.org/membership-and-registrations/member-communities/bcs-it-leaders-forum/papers/> .

² Eg Agutter, Claire, *ITIL Foundations Essentials, ITIL 4 edition*, IT Governance Publishing, 2020

³ <https://www.bcs.org/membership-and-registrations/member-communities/bcs-it-leaders-forum/papers/>

⁴ ISO/IEC 20000 see https://en.wikipedia.org/wiki/ISO/IEC_20000: note that ISO documents are behind paywalls, so secondary sources are used as references.

⁵ BSI – British Standards Institute - <https://www.bsigroup.com/en-GB>

⁶ As ² above

⁷ <https://www.bcs.org/media/rxdmjr5h/availability-6-report-nine-banks-data-roundtable-220425.pdf>

to influence ITIL to add “Problem Anticipation” to “Problem Management” as an explicit separate practice. The stated purpose of Problem Management⁸ is “to reduce the likelihood and impact of incidents by identifying actual and potential causes of incidents and managing workarounds and known errors”; however, while recovery activities after an outage are highly visible, precautionary activities or those to locate the source of outage demand more attention than they seem to get in many organisations.

ITIL

ITIL (aka Information Technology Infrastructure Library) is a framework with a set of practices for IT activities such as IT service management (ITSM) and IT asset management (ITAM) that focus on aligning IT services with the needs of the business. ITIL is neither organization-specific nor technology-specific. It is designed to allow organizations to establish a baseline and can be used to demonstrate compliance and to measure improvements.

The origin was a set of recommendations by the UK Government's Central Computer and Telecommunications Agency (CCTA) in the 1980s, to standardize IT management practices across government functions. ITIL was released in 1989, and the first certification scheme was in 1993.

In April 2001, the CCTA was merged into the Office of Government Commerce (OGC), an office of the UK Treasury, and ITIL version 2 was released. In May 2007, ITIL version 3 was released, now known as ITIL 2007 Edition. In July 2011, ITIL 2011 was released. In 2013, ITIL was acquired by AXELOS, a joint venture between Capita and the UK Cabinet Office⁹.

In February 2019, ITIL 4 was released, the 4 a reference to the 4th industrial revolution. The main changes were: to consider end-to-end Service Management from holistic and value-centric perspectives, to align with philosophies such as Agile, DevOps, and Lean, and to reduce the emphasis on IT Service Management in favour of general Service Management.

In June 2021, PeopleCert¹⁰ completed the acquisition of AXELOS.

⁸ Extracted from ² above

⁹ <https://find-and-update.company-information.service.gov.uk/company/08489114>

¹⁰ <https://www.peoplecert.org/>

ISO/IEC 20000

This is the international standard for IT [service management](#). It was developed in 2005 by [ISO/IEC JTC1/SC7](#) and revised in 2011 and 2018.^[1] It was originally based on the earlier BS 15000 that was developed by [BSI Group](#).^[2] Both were developed to reflect best practice guidance contained within the [ITIL](#) framework, although it equally supports other IT service management frameworks and approaches including [Microsoft Operations Framework](#)¹¹ and components of [ISACA's COBIT](#) framework¹².

The standard was first published in December 2005. In June 2011, the ISO/IEC 20000-1:2005 was updated to ISO/IEC 20000-1:2011. In February 2012, ISO/IEC 20000-2:2005 was updated to ISO/IEC 20000-2:2012. ISO 20000-1 has been revised by ISO/IEC JTC 1/SC 40 IT Service Management and IT Governance. The revision was released in July 2018.

Since 2018 there have been a number of related ISO publications, including

- ISO/IEC 20000-10: Concepts and vocabulary
- ISO/IEC 20000-11: Guidance on the relationship between ISO/IEC 20000-1 and service management frameworks: ITIL
- ISO/IEC 20000-15: Guidance on the application of Agile and DevOps principles in a service management system

ITIL4 status and governance

Status

ITIL V4¹³ introduces 34 'practices' within IT operations. For each practice, ITIL 4 describes the key activities, inputs, outputs and exemplary roles.

ITIL 4 practices are grouped into 3 categories:

- General management practices: some examples are: Strategy management, Portfolio management, Architecture management and Risk management
- Service management practices: examples are: Service-level management, Availability management and Capacity and performance management

¹¹ [Microsoft Operations Framework](#)

¹² <https://www.isaca.org/resources/cobit>

¹³ As ² above

- Technical management practices: including three practices: Deployment management, Infrastructure and platform management and Software development and management.

ITIL 4 training and certification is through Accredited Training Organisations (ATO's) of PeopleCert. Certification in ITIL is only available to individuals and not organizations.

Governance

There is no formal independent third-party compliance assessment available to demonstrate ITIL compliance in an organization.

Since 2021, the ITIL trademark has been owned by PeopleCert¹⁴. PeopleCert's business appears to consist of licensing ITIL to training and certification organisations, and the company does not appear to have any plans to extend the range of activities within ITIL to reflect new IT and business paradigm.

ISO status and governance

Status (this section is excerpted from Wikipedia¹⁵)

As with most ISO standards, there is both a certification scheme targeting organizations, while the qualification scheme targets individuals.

Qualification of individuals is offered by URS, APMG-International, EXIN, PECB, Loyalist Certification Services, TÜV SÜD Akademie, PEOPLECERT, and IRCA.

There are certification bodies around the world, for instance, BSI in UK, Quality Austria in Austria, JQA in Japan, KFQ in Korea and SAI Global in Australia, Asia and Americas. The importance of certification to ISO/IEC 20000 is not correlated by global adoption.^[5]

ISO collects the number of certificates issued from the different certification bodies and publishes the results annually¹⁶. As of December 2023, there were 3670 certificates issued to organisations.

¹⁴ <https://www.peoplecert.org/news-and-announcements/peoplecert-completes-axelos-acquisition>

¹⁵ https://en.wikipedia.org/wiki/ISO/IEC_20000

¹⁶ <https://www.iso.org/the-iso-survey.html>

Governance

A council with a rotating membership of 20 member bodies provides guidance and governance, including setting the annual budget of the central secretariat of ISO. The technical management board is responsible for more than 250 technical committees, who develop the ISO standards.

ISO/IEC 20000 was developed in 2005 by ISO/IEC JTC1/SC7 and revised in 2011 and 2018.

ISO-IEC have recently published ISO-IEC 27031 ICT Readiness for Business Continuity. While it sounds promising, a group of ISO/BCM experts find it to be a very disappointing document and are working on proposals for a new version.

Recommendation

We should explore BCS links to BSI and ISO through the BCS SIG¹⁷ SM-ITAM, and academic routes, to discuss the potential for extending problem anticipation and other aspects of service management which have new focus for complex tightly coupled systems in a 24/7 environment.

We should track developments on ISO 27000, through our wider network.

¹⁷ <https://www.bcs.org/membership-and-registrations/member-communities/service-management-and-it-asset-management-sm-itam-specialist-group/>