
**Systems and software engineering —
Lifecycle profiles for Very Small
Entities (VSEs) —**

**Part 5-3:
Service delivery guidelines**

*Ingénierie des systèmes et du logiciel — Profils de cycle de vie pour
très petits organismes (TPO) —*

Partie 5-3: Lignes directrices de prestation des services





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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*.

A list of all parts in the ISO/IEC 29110 series can be found on the ISO website.

Introduction

Very Small Entities (VSEs) around the world are creating valuable products and services. For the purpose of ISO/IEC 29110, a Very Small Entity (VSE) is an enterprise, an organization, a department or a project having up to 25 people. Since many VSEs develop and/or maintain system and software components used in systems, either as independent products or incorporated in larger systems, a recognition of VSEs as suppliers of high quality products is required.

According to the Organization for Economic Co-operation and Development (OECD) SME and Entrepreneurship Outlook report (2005) 'Small and Medium Enterprises (SMEs) constitute the dominant form of business organization in all countries world-wide, accounting for over 95 % and up to 99 % of the business population depending on country'. The challenge facing governments and economies is to provide a business environment that supports the competitiveness of this large heterogeneous business population and that promotes a vibrant entrepreneurial culture.

From studies and surveys conducted, it is clear that the majority of International Standards do not address the needs of VSEs. Implementation of and conformance with these standards is difficult, if not impossible. Consequently, VSEs have no, or very limited, ways to be recognized as entities that produce quality systems/system elements including software in their domain. Therefore, VSEs are excluded from some economic activities.

It has been found that VSEs find it difficult to relate International Standards to their business needs and to justify the effort required to apply standards to their business practices. Most VSEs can neither afford the resources, in terms of number of employees, expertise, budget and time, nor do they see a net benefit in establishing over-complex systems or software life cycle processes. To address some of these difficulties, a set of guidelines has been developed based on a set of VSE characteristics. The guidelines are based on subsets of appropriate standards processes, activities, tasks, and outcomes, referred to as Profiles. The purpose of a profile is to define a subset of International Standards relevant to the VSEs' context; for example, processes, activities, tasks, and outcomes of ISO/IEC/IEEE 12207 for software; and processes, activities, tasks, and outcomes of ISO/IEC/IEEE 15288 for systems; and information products (documentation) of ISO/IEC/IEEE 15289 for software and systems.

VSEs can achieve recognition through implementing a profile and by being audited against ISO/IEC 29110 specifications.

The ISO/IEC 29110 series of standards and technical reports can be applied at any phase of system or software development within a life cycle. This series of standards and technical reports is intended to be used by VSEs that do not have experience or expertise in adapting/tailoring ISO/IEC/IEEE 12207 or ISO/IEC/IEEE 15288 standards to the needs of a specific project. VSEs that have expertise in adapting/tailoring ISO/IEC/IEEE 12207 or ISO/IEC/IEEE 15288 are encouraged to use those standards instead of ISO/IEC 29110.

ISO/IEC 29110 is intended to be used with any lifecycle such as: waterfall, iterative, incremental, evolutionary or agile.

Systems, in the context of ISO/IEC 29110, are typically composed of hardware and software components.

The ISO/IEC 29110 series, targeted by audience, has been developed to improve system or software and/or service quality and process performance. See [Table 1](#).

Table 1 — ISO/IEC 29110 target audience

ISO/IEC 29110	Title	Target audience
ISO/IEC 29110-1	Overview	VSEs and their customers, assessors, standards producers, tool vendors and methodology vendors.
ISO/IEC 29110-2	Framework for profile preparation	Profile producers, tool vendors and methodology vendors. Not intended for VSEs.
ISO/IEC 29110-3	Certification and assessment guidance	VSEs and their customers, assessors, accreditation bodies.
ISO/IEC 29110-4	Profile specifications	VSEs, customers, standards producers, tool vendors and methodology vendors.
ISO/IEC 29110-5	Management, engineering and service delivery guides	VSEs and their customers.

If a new profile is needed, ISO/IEC 29110-4 and ISO/IEC TR 29110-5 can be developed with minimal impact to existing documents.

ISO/IEC 29110-1 defines the terms common to the ISO/IEC 29110 series. It introduces processes, lifecycle and standardization concepts, the taxonomy (catalogue) of ISO/IEC 29110 profiles and the ISO/IEC 29110 series. It also introduces the characteristics and needs of a VSE and clarifies the rationale for specific profiles, documents, standards and guidelines.

ISO/IEC 29110-2 introduces the concepts for systems and software engineering profiles for VSEs. It establishes the logic behind the definition and application of profiles. For standardized profiles, it specifies the elements common to all profiles (structure, requirements, conformance, assessment). For domain-specific profiles (profiles that are not standardized and developed outside of the ISO process), it provides general guidance adapted from the definition of standardized profiles.

ISO/IEC 29110-3 defines certification schemes, assessment guidelines and compliance requirements for process capability assessment, conformity assessments, and self-assessments for process improvements. ISO/IEC 29110-3 also contains information that can be useful to developers of certification and assessment methods and developers of certification and assessment tools. ISO/IEC 29110-3 is addressed to people who have direct involvement with the assessment process, e.g. the auditor, certification and accreditation bodies and the sponsor of the audit, who need guidance on ensuring that the requirements for performing an audit have been met.

ISO/IEC 29110-4-m provides the specification for all profiles in one profile group (a profile group may contain a single profile or multiple profiles). A profile is specified in terms of requirements imported from appropriate base standards.

ISO/IEC TR 29110-5-m provides management, engineering and service delivery guidelines for the profiles in a profile group.

This document provides guidelines to manage a set of services delivered to customers.

Figure 1 describes the ISO/IEC 29110 International Standards (IS) and Technical Reports (TR) and positions the parts within the framework of reference. Overview, assessment guidelines, management and engineering guidelines are available from ISO as freely available Technical Reports (TR). The Framework document, profile specifications and certification schemes are published as International Standards (IS).

For readers that are new to the ISO/IEC 29110 series, refer to ISO/IEC TR 29110-1:2016 *Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 1: Overview*. Part 1 defines the terms common to the set of ISO/IEC 29110 documents. It introduces processes, lifecycle and standardization concepts, the taxonomy (catalogue) of ISO/IEC 29110 profiles and the ISO/IEC 29110 series. It also introduces the characteristics and requirements of a VSE and clarifies the rationale for specific profiles, documents, standards and guidelines.

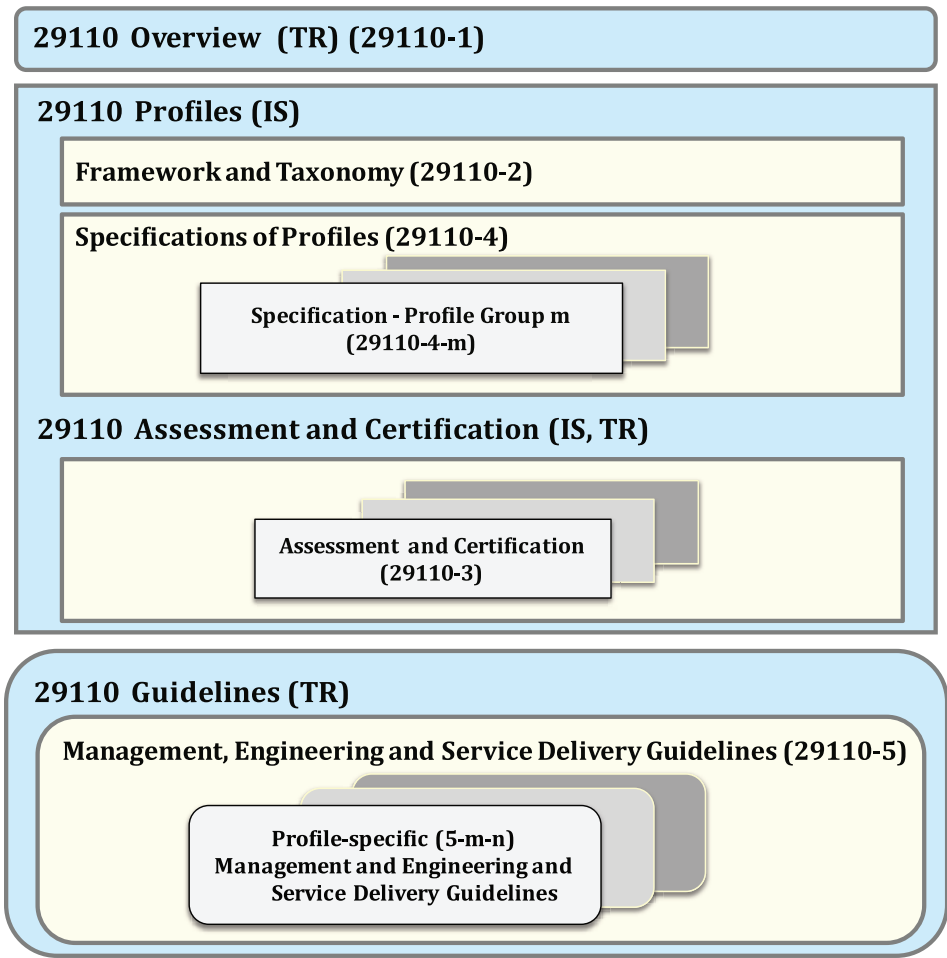


Figure 1 — ISO/IEC 29110 series

Systems and software engineering — Lifecycle profiles for Very Small Entities (VSEs) —

Part 5-3: Service delivery guidelines

1 Scope

1.1 Fields of application

These Service Delivery guidelines are applicable to Very Small Entities (VSEs). A VSE is an enterprise, an organization, a department or a project having up to 25 people.

This document provides guidance to manage a set of services delivered to customers. The VSE can act as an internal service provider (providing services internal to the VSE) or as an external service provider (providing services commercially to external customers). These lifecycle processes (Governance, Service Control, Service Relationship and Service Incident) support and enhance the activities of software and system operations (further to development and installation) to create effective and efficient products and services.

This document provides guidance for Service Delivery. This document, when implemented, will assist and guide the VSE in the delivery of services which can benefit customers. This document does not promote uniformity in approach across all organizations as specific objectives and initiatives are tailored to suit an individual organization's needs.

Tasks described in this guideline document (and therefore activities and processes) are related by input/output relationships which imply a logical execution sequence. The order of presentation of the processes or the associated numbering scheme is for identification purposes only, NOT to indicate implementation or execution order. As every VSE is different; tasks can be implemented in an order that is suitable for the organization, while respecting the relationships between tasks.

1.2 Target audience

This document is intended to be used by VSEs to establish processes to implement effective and efficient service delivery. This service delivery guidelines document can be used by VSEs that are offering only services to its customers or it can be combined with the information from ISO/IEC 29110 systems and/or software management and engineering guidelines.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 29110-2, *Software engineering — Lifecycle profiles for Very Small Entities (VSEs) — Part 2: Framework and taxonomy*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 29110-2 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

activity

set of cohesive tasks of a process

[SOURCE: ISO/IEC 29110-2-1:2015, 4.1]

3.2

agreement

mutual acknowledgement of terms and conditions under which a working relationship is conducted

EXAMPLE Contract, memorandum of agreement.

[SOURCE: ISO/IEC 12207:2008, 4.4]

3.3

audit

systematic, independent, documented process for obtaining records, statements of fact or other relevant information and assessing them objectively, to determine the extent to which specified requirements are fulfilled

Note 1 to entry: Whilst “audit” applies to management systems, “assessment” applies to conformity assessment bodies as well as more generally.

[SOURCE: ISO/IEC 29110-1:2016, 3.7]

3.4

change

add, move, modify, removal of a configuration item (CI)

Note 1 to entry: Changes can be classified based on risk and impact to the organization; common types include pre-approved, emergency or normal.

3.5

configuration item

CI

item or aggregation of hardware, software or both that is designated for configuration management and treats as a single entity in the configuration management process

Note 1 to entry: Configuration items can vary widely in complexity, size and type, ranging from an entire system including all hardware, software and documentation, to a single module or a minor hardware component.

[SOURCE: ISO/IEC/IEEE 15288:2015, 4.1.14]

3.6

control manager

CM

role that approves/rejects change and manages change-related tasks such as testing and deployment

Note 1 to entry: This role may be combined with other roles and is a direct report (or shared role) with the Service Manager. If one person is appointed to the role, the person reports to the Service Manager for service matters and has the authority over change-related tasks.

3.7
customer
CUS

person or organization that could or does receive a product or a service that is intended for or required by this person or organization

EXAMPLE Consumer, client, end-user, retailer, receiver of product or service from an internal *process* (3.23), beneficiary and purchaser.

Note 1 to entry: A customer can be internal or external to the organization.

[SOURCE: ISO 9000:2015, 3.2.4]

3.8
document

information and the medium on which it is contained

EXAMPLE Record, specification, procedure document, drawing, report, standard.

Note 1 to entry: The medium can be paper, magnetic, electronic or optical computer disc, photograph or master sample, or combination thereof.

Note 2 to entry: A set of documents, for example specifications and records, is frequently called “documentation”.

Note 3 to entry: Some requirements (e.g. the requirement to be readable) relate to all types of documents. However, there can be different requirements for specifications (e.g. the requirement to be revision controlled) and for records (e.g. the requirement to be retrievable).

[SOURCE: ISO 9000:2015, 3.8.5]

3.9
effectiveness

extent to which planned activities are realized and planned results are achieved

[SOURCE: ISO 9000:2015, 3.7.11, modified — Note 1 to entry has been removed.]

3.10
efficiency

relationship between the result achieved and the resources used

[SOURCE: ISO 9000:2015, 3.7.10]

3.11
external service provider

providing services commercially to external customers

3.12
governance

system of directing and controlling

[SOURCE: ISO/IEC 38500:2015, 2.8]

3.13
incident

anomalous or unexpected event, set of events, condition, or situation at any time during the life cycle of a project, product, service, or system

[SOURCE: ISO/IEC/IEEE 15288:2015, 4.1.21]

3.14
incident manager
IM

role that has authority over all incidents and manages incident-related tasks

Note 1 to entry: This role may be combined with other roles. This role is a direct report (or shared role) with the Service Manager. The person can also be responsible for a Service Desk, if one exists.

3.15
information security policy

document that states, in writing, how an organization plans to protect its physical and information technology assets

[SOURCE: ISO/TS 21547:2010, 3.2.25]

3.16
internal service provider

providing services internal to the VSE

3.17
lifecycle

evolution of a system, product, service, project or other human-made entity, from conception through retirement

[SOURCE: ISO/IEC/IEEE 15288:2015, 4.1.23]

3.18
management
MGT

coordinated activities to direct and control an organization

Note 1 to entry: Management can include establishing *policies* and *objectives*, and *processes* to achieve these objectives.

Note 2 to entry: The word “management” sometimes refers to people, i.e. a person or group of people with authority and responsibility for the conduct and control of an organization. When “management” is used in this sense, it should always be used with some form of qualifier to avoid confusion with the concept of “management” as a set of activities defined above. For example, “management shall.” is deprecated whereas “top management shall.” is acceptable. Otherwise different words should be adopted to convey the concept when related to people, e.g. managerial or managers.

[SOURCE: ISO 9000:2015, 3.3.3]

3.19
operator

individual or organization that performs the operations of a system

Note 1 to entry: The role of operator and the role of user can be vested, simultaneously or sequentially, in the same individual or organization.

Note 2 to entry: An individual operator combined with knowledge, skills and procedures can be considered as an element of the system.

Note 3 to entry: An operator may perform operations on a system that is operated, or of a system that is operated, depending on whether or not operating instructions are placed within the system boundary.

[SOURCE: ISO/IEC/IEEE 15288:2015, 4.1.26]

3.20**organization**

person or a group of people that has its own functions responsibilities, authorities and relationships to achieve its objectives

[SOURCE: ISO 9000:2015, 3.2.1, modified — Notes 1 and 2 to entry have been removed.]

3.21**practitioner****PT**

person or team performing the activities within one or more process areas

3.22**procedure**

specified way to carry out an activity or a process

Note 1 to entry: Procedures can be documented or not.

[SOURCE: ISO 9000:2015, 3.4.5]

3.23**process**

set of interrelated or interacting activities which transforms inputs into outputs to deliver an intended result

Note 1 to entry: Whether the “intended result” of a process is called output, product or service depends on the context of the reference.

Note 2 to entry: Inputs to a process are generally the outputs of other processes and outputs of a process are generally the inputs to other processes.

Note 3 to entry: Two or more interrelated and interacting processes in series can also be referred to as a process.

Note 4 to entry: Processes in an organization are generally planned and carried out under controlled conditions to add value.

[SOURCE: ISO 9000:2015, 3.4.1, modified — Notes 5 and 6 to entry have been removed.]

3.24**profile**

set of one or more base standards and/or profiles, and where applicable, the identification of chosen classes, conforming subsets, options and parameters of those base standards, or standardized profiles necessary to accomplish a particular function

[SOURCE: ISO/IEC TR 10000-1:1998, 3.1.4, modified — article “a” has been removed from the beginning of the definition, “ISPs” has been replaced by “profiles” in the first instance, and in the second instance, “ISPs” has been replaced by “standardized profiles”.]

3.25**record**

document stating results achieved or providing evidence of activities performed

[SOURCE: ISO 9000:2015, 3.8.10]

3.26**relationship manager****RM**

role that develops and manages the customer and supplier interfaces as well as the *service catalogue* ([3.28](#))

Note 1 to entry: This role may be combined with other roles. This role is a direct report (or shared role) with the Service Manager.

3.27

resource

asset that is utilized or consumed during the execution of a process

Note 1 to entry: Includes diverse entities such as funding, personnel, facilities, capital equipment, tools, and utilities such as power, water, fuel and communication infrastructures.

Note 2 to entry: Resources include those that are reusable, renewable or consumable.

[SOURCE: ISO/IEC 12207:2008, 4.3.7, modified — Notes 1 and 2 to entry added.]

3.28

service

performance of activities, work or duties

Note 1 to entry: A service is self-contained, coherent, discrete, and can be composed of other services.

Note 2 to entry: A service is generally an intangible product.

[SOURCE: ISO/IEC 15288:2015, 4.1.42]

3.29

service catalogue

documented information about services that an organization provides to its customers

3.30

service change request

formal procedure for submitting a request for an adjustment of a configuration item

[SOURCE: ISO/IEC TR 18018:2010, 3.5, modified — “service” has been added to the term.]

3.31

service delivery policy

formal, brief, and high-level statement that embraces an organization’s general beliefs, ethics, goals, and objectives of service(s)

3.32

service design

creation of a service solution(s); typically including the components which create the desired functionality, technology architecture that supports the components, the processes to support and manage the solution, the associated measures (internal performance or customer agreed measures), and the supply chain interfaces

3.33

service level agreement

SLA

documented agreement between a service provider and a customer that identifies services and service targets

Note 1 to entry: A service level agreement can also be established between the service provider and a supplier or an internal group or a customer acting as a supplier.

Note 2 to entry: A service level agreement can be included in a contract or another type of documented agreement.

[SOURCE: ISO/IEC 20000-10:2013, 2.29]

3.34
service manager
SM

role that directly oversees the delivery of services and provides leadership and direction; has decision-making authority on all activities; is a direct report or peer to the highest level of the organization

Note 1 to entry: The service manager may have more than one role in the delivery of services (assign the responsibilities of the Control Manager and Service Manager to the same individual).

3.35
stakeholder

individual or organization having a right, share, claim, or interest in a system or in its possession of characteristics that meet their needs and expectations

EXAMPLE End users, end user organizations, supporters, developers, trainers, maintainers, disposers, acquirers, supplier organizations and regulatory bodies.

[SOURCE: ISO/IEC/IEEE 15288:2015, 4.1.44, modified — Note 1 to entry has been removed.]

3.36
supplier
SUP

organization or an individual that enters into an agreement with the acquirer for the supply of a product or service

Note 1 to entry: Other terms commonly used for supplier are contractor, producer, seller or vendor.

Note 2 to entry: The acquirer and the supplier sometimes are part of the same organization.

[SOURCE: ISO/IEC/IEEE 15288:2015, 4.1.45]

3.37
system

combination of interacting elements organized to achieve one or more stated purposes

Note 1 to entry: A system may be considered as a product or as the services it provides.

Note 2 to entry: In practice, the interpretation of its meaning is frequently clarified by the use of an associative noun, e.g. aircraft system. Alternatively, the word “system” may be substituted simply by a context-dependent synonym, e.g. aircraft, though this may then obscure a system principles perspective.

[SOURCE: ISO/IEC/IEEE 15288:2015, 4.1.46, modified — Note 3 to entry has been removed.]

3.38
top management

person or group of people who directs and controls an organization at the highest level

Note 1 to entry: Top management has the power to delegate authority and provide resources within the organization.

Note 2 to entry: If the scope of the management system covers only part of an organization, then top management refers to those who direct and control that part of the organization.

Note 3 to entry: This definition is only included to support wording used in quoted definitions; with 25 or less people in a VSE, the concept of top management may not be applicable.

[SOURCE: ISO 9000:2015, 3.1.1, modified — Note 3 to entry has been replaced.]

3.39
vital business service

service that is critical to the success of the business

4 Abbreviated terms and process structure

4.1 Abbreviated terms

The following abbreviations are used in this document:

CM	Control Manager
CO	Service control process
CUS	Customer
GO	Governance process
IM	Incident Manager
IN	Service incident process
MGT	Management
PT	Practitioner
RE	Service Relationship process
RM	Relationship Manager
SM	Service Manager
SUP	Supplier
VSE	Very Small Entity
WP	Work product

4.2 Convention

4.2.1 Process description

Each process is described using the following structure:

Name - process identifier, followed by its abbreviation in parentheses “()”.

Purpose - expected outcome of the effective implementation of the process. The implementation of the process should provide tangible benefits to the stakeholders.

Objectives - ensures the process purpose is accomplished. The objectives are identified by the abbreviation of the process name, followed by the letter “O” and a consecutive number, for example GO.01, RM.02.

- **Activity** – a set of cohesive tasks. The activities are defined in individual tables which delineate the role, the specific tasks, input and output work product(s). The task description does not impose any technique or method to perform it. The selection of the techniques or methods is left to the VSE.
- **Roles Involved** – names and abbreviation of the functions to be performed by the service delivery team. Several roles may be assigned to an individual and one role may be shared by several persons. Roles are assigned to service delivery team members based on requirements of the service. See [Clause 10](#) for the alphabetical list of the roles, its abbreviations and required competencies description.
- **Tasks** – A task is a requirement, recommendation, or permissible action, intended to contribute to the achievement of one or more objectives of a process. A process activity is the first level of

process workflow decomposition and the second one is a task. Activities are identified by process name abbreviation followed by consecutive number and the activity name. Each task is identified by activity ID and consecutive number, for example, GO.1.1, GO.1.2.

- **Input Work Products** – products required to perform the process and its corresponding source, which can be another process or an external entity to the project, such as the Customer.
- **Output Work Products** – products generated by the process and its corresponding destination, which can be another process or an external entity to the project, such as Customer or Organizational Management.

4.2.2 Work Product Description

Work products are identified with a unique code, WP.NN, where NN is a sequential number defined in [Clause 11](#).

5 Overview of this document

This document is intended to be used by the VSE to establish processes to implement an effective and efficient service delivery. A VSE can also request suppliers to follow the same processes to ensure an effective and efficient supply chain.

A VSE may apply the guidance in one of several approaches:

1. Implement one or more of the four processes: Governance, Service Control, Service Relationship, Service Incident. Additionally, implementing the Governance process can address two scenarios:
 - as a stand-alone, to create a good management base for the VSE; and
 - as an addition to implementing Software or Systems ISO/IEC 29110 Guidelines.
2. Seeking third party recognition for either the full (all four processes mentioned above) or partial implementation (for example, the Governance process or the Operational processes only) of ISO/IEC 29110-4-3 profile specification (conformity audit);
3. Request third party supplier(s) to partially or fully implement the scope of the ISO/IEC 29110-4-3 profile specification.

[Figure 2](#) below illustrates the service delivery processes which are presented in this document. They are:

- Governance process (GO) which establishes a system for directing and controlling activities within the VSE;
- Service control process (CO) which supports and controls change to defined vital business services and mitigates the associated risk of change;
- Service relationship process (RE) which maintains quality relationships with customers and suppliers needed to support efficient service delivery; and
- Service incident process (IN) which restores service to the business with minimal disruption or prevents incidents from occurring.

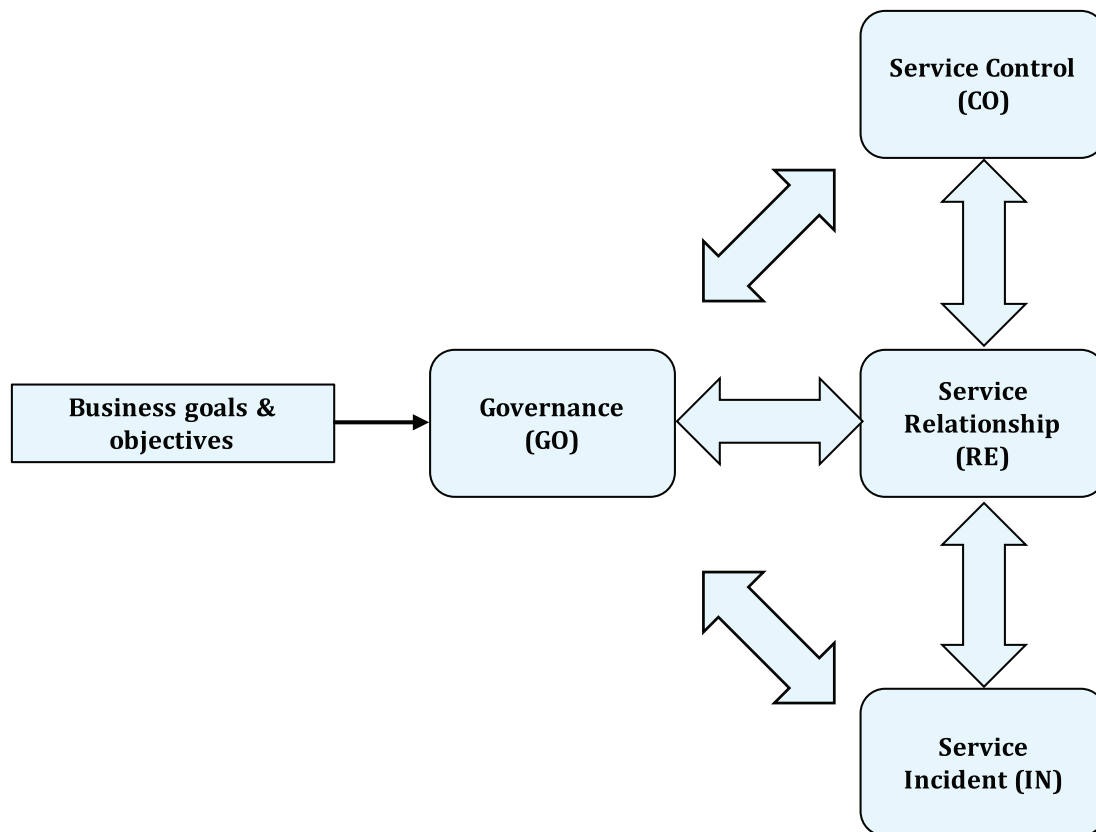


Figure 2 — Service Delivery Processes diagram

6 Governance process (GO)

6.1 Introduction

Many VSEs are already doing “something” right in delivering services to their customer(s), but, are the operational processes and activities effective and efficient? An answer cannot be provided in every single case, but it would not be unfair to state there is room for improvement.

If one accepts that there are some structures in place that allow the VSE to operate, such as conformity to legal, regulatory and contractual obligations, then the path to improvement should not be, initially, process improvement. Rather improvements should focus on implementing the governing factors, such as defining the scope of operation with accompanying policies to guide actions, necessary for business-based operations.

Before improving any process, the VSE should define the scope of their service delivery activities, which will support the achievement of business goals and objectives. This action alone will provide the necessary boundaries and constraints so resources are deployed appropriately to meet business goals and objectives. A VSE addressing governance before improving a process or implementing a new process can achieve more efficient, effective and economical service delivery.

NOTE Economical in this document means resources are purchased at the right level to achieve effectiveness.

6.2 GO purpose

The purpose of the governance process is to establish a system for directing and controlling service delivery activities within the VSE. The result of these activities will define the scope, responsibilities and leadership requirements for an effective and efficient service delivery.

This structure provides management control over activities as well as a service improvement emphasis. Within a well-organized governance process, resources are deployed appropriately to meet the needs of current and future customers while always maintaining market relevance. These governance process principles describe a value-generating focus for the VSE.

6.3 G0 objectives

G0.01 Define the scope of the service delivery activities and assign authority;

G0.02 Implement a service delivery policy, objectives and plan(s);

G0.03 Establish a management structure; and

G0.04 Report on and improve the services provided to customers.

6.4 G0 diagram

Figure 3 illustrates the governance process activities, associated tasks and work products.

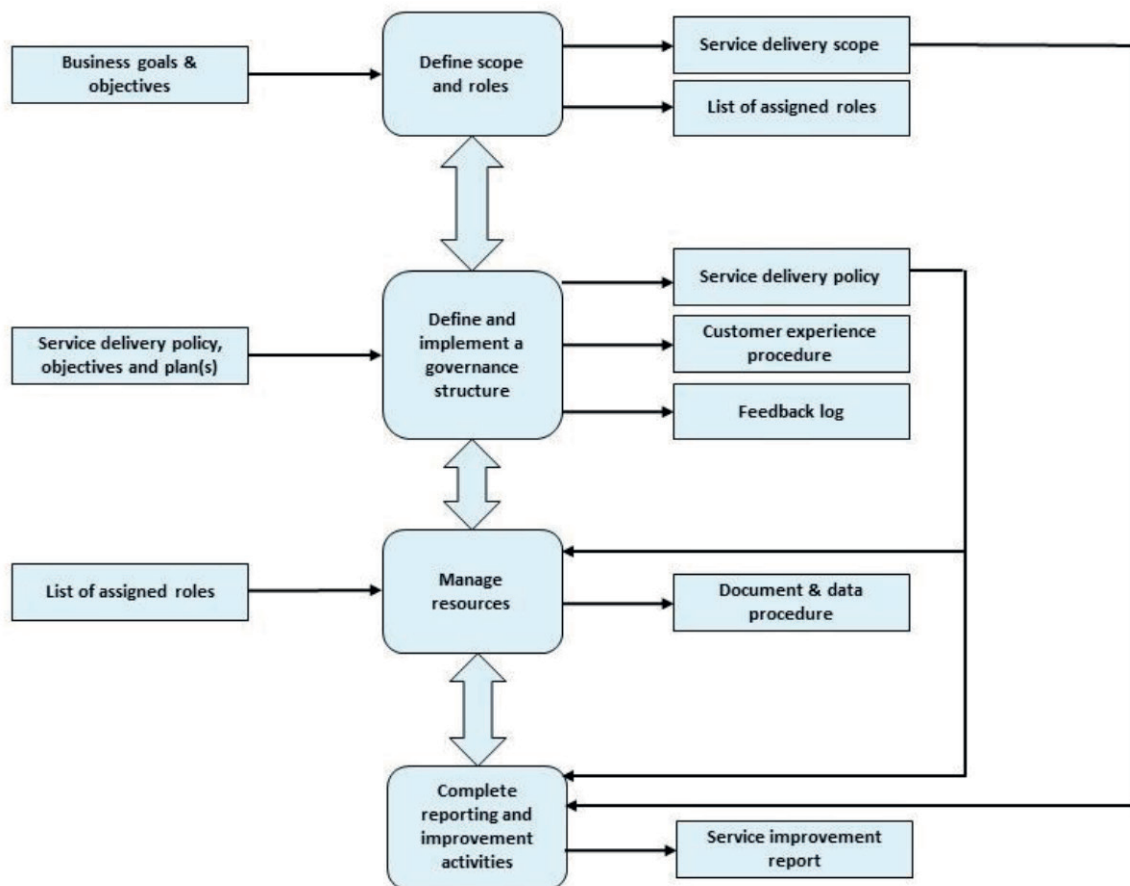


Figure 3 — Governance process diagram

6.5 G0 activities

The Governance process has the following activities:

- G0.1 Define the scope of activity and required roles (see [Table 2](#));
- G0.2 Define and implement governance structures (see [Table 3](#));

- GO.3 Manage resources including documentation (see [Table 4](#)); and
- GO.4 Complete reporting and improvement activities (see [Table 5](#)).

NOTE Many of the output work products from the Governance process can be consolidated into one document, possibly called Governance of the VSE or Governance of (using the commercial name of the VSE).

6.5.1 GO.1 Define the scope of the activity and required roles

Business goals and objectives are not an internal service provider's work product. External service providers should define the business goals and objectives as service provision is their business activity.

Many of the input work products for the Governance process originate in the organization the VSE is supporting. There is no need to recreate these work products – use what is available for efficient and effective services.

NOTE 1 See [Table 14](#) for a description of work products and suggested content.

Table 2 — GO.1 Task list

Role	Task List	Input Work Products	Output Work Products
MGT CUS	GO.1.1 Define the scope of the service delivery activities. NOTE The scope includes all present customers at a minimum.	<i>Business goals and objectives [Approved]</i>	<i>Service delivery scope [Approved]</i>
SM MGT	GO.1.2 Assign roles and responsibilities: — Service manager (at minimum); and — supporting roles (Control Manager, Incident manager) as needed by the VSE depending on the type of business, customer requirements, size, legal requirements. NOTE Ensure separation of duties, if possible, to prevent conflict of interest.	<i>Service delivery scope [Approved]</i>	<i>List of assigned roles [Approved]</i>

6.5.2 GO.2 Define and implement the governance structure

Table 3 — GO.2 Task list

Role	Task List	Input Work Products	Output Work Products
SM MGT	GO.2.1 Draft a business-based service delivery and information security policy, objectives and plan(s). NOTE 1 Feedback from customers already received or requested can be valuable. NOTE 2 The Service Manager has been appointed in task GO.1.2. NOTE 3 Business goals and objectives are defined by business leadership, which is beyond the scope of this document. These are input products originating outside of the service delivery group.	<i>Business goals and objectives [Approved]</i> <i>Service delivery scope [Approved]</i>	<i>Service delivery policy, objectives and plan(s) [Draft]</i>
SM	GO.2.2 Approve and deploy the policies and plan(s).	<i>Service delivery policy, objectives and plan(s) [Draft]</i>	<i>Service delivery policy, objectives and plan(s) [Approved]</i>
MGT CUS SUP	GO.2.3 Define and approve an approach to: — measure customer experience; — manage comments (compliments and complaints); and — maintain a feedback log. NOTE 1 Legal guidance can be advisable. NOTE 2 See ISO 10001:2007, ISO 10002:2004, ISO 10003:2007 and ISO 10004:2014 for additional information. NOTE 3 RE.2.3 applies the approach.	<i>Service delivery policy, objectives and plan(s) [Approved]</i>	<i>Customer experience approach [Approved]</i>
SM CUS	GO.2.4 Update service delivery policy, objectives and plan(s) based on customer feedback and management decisions.	<i>Feedback log [Maintained]</i> <i>Service delivery policy, objectives and plan(s) [Approved]</i>	<i>Service delivery policy, objectives and plan(s) [Updated]</i>

6.5.3 GO.3 Manage resources including documentation

Table 4 — GO.3 Task list

Role	Task List	Input Work Products	Output Work Products
SM SUP	GO.3.1 Obtain, monitor and manage human resources to meet the requirements of the service delivery scope and policy.	<i>Service delivery policy, objectives and plan(s) [Updated]</i> <i>List of assigned roles [Approved]</i>	<i>List of assigned roles [Updated]</i>
SM SUP	GO.3.2 Based on the service delivery policy, objectives and plan(s), define the management and secure storage of data and minimal documentation (the creation of a repository). NOTE This task can also dictate the storage of other data and documentation not proposed by this document (financial material, personnel files) but still important for the VSE.	<i>Service delivery policy, objectives and plan(s) [Updated]</i> <i>Data and document management procedure [Draft]</i>	<i>Data and document management procedure [Approved]</i>

6.5.4 GO.4 Complete reporting and improvement activities

Table 5 — GO.4 Task list

Role	Task List	Input Work Products	Output Work Products
SM CUS SUP MGT	GO.4.1 Prepare and deliver an improvement report. NOTE Information security improvements would be included.	<i>Business goals and objectives [Approved]</i> <i>Service delivery scope [Approved]</i> <i>Service delivery policy, objectives and plan(s) [Approved]</i> <i>Feedback log [Updated]</i>	<i>Improvement report [Draft]</i>
MGT CUS SUP	GO.4.2 Review and take action (approve, reject) based on the Improvement report.	<i>Improvement report [Draft]</i>	<i>Improvement report [Approved]</i>

7 Service Control process (CO)

7.1 Introduction

A risky activity in any organization is the deployment of a new or changed service, the transfer or retirement of a service. Careful planning and execution, in accordance with the defined governance process activities, is required for the approval, design, test, deployment and transfer or retirement activities. The CO process is used for:

- defining and deploying a new service;
- improving existing services (e.g., updating software/firmware, replacing hardware components, changing functionality);
- transferring service (e.g., new ownership of infrastructure due to acquisition of the organization); and
- retiring services.

Information security has been included in this process because of the common requirement to protect organizational information, data and knowledge with effective controls. Organizations which have achieved ISO/IEC 27001:2013 certification, will have met the security requirements within this process.

To maintain control, the VSE should classify three types of change and manage them according to organizational risk tolerance levels. The three types are:

Pre-approved change – changes to the service infrastructure with little or no organizational risk, identified by the Control manager (CM) and agreed by the business.

EXAMPLE A pre-approved change could include service requests (new laptop, move from one office to another, arriving of new employee or temporary help), standard configuration/deployment of a server; add space to a data table.

Emergency change to the service infrastructure – an unplanned/unscheduled change, due to a potential or actual high impact event that requires immediate remedial action / deployment.

EXAMPLE Emergency changes could include actions to resolve an incident on a vital business service, security patches.

Normal change – change to the service infrastructure that does not fit the pre-approved or emergency change criteria; that, due to size, impact or risk, requires formal assessment prior to deployment.

EXAMPLE A normal change could include deploying a new service; updating an application, operating system, firmware; adding additional capacity or creating additional cloud domains.

NOTE DevOps refers to a set of practices which emphasize collaboration and communication between software developers and IT professionals while automating the process of software delivery and infrastructure change. Examples using DevOps principles are provided in each of the Service Control activities.

7.2 CO purpose

The purpose of the service control process is to support and control change to defined vital business services and mitigate the associated risk of change. The service control process activities are performed within the boundaries defined by the governance process. They include:

- the design of the new or changed services, specifically the availability, continuity, capacity and information security requirements;
- retirement of services; and
- transfer of services.

7.3 CO objectives

CO.01 Control and manage change to services and subsequent deployments

CO.02 Secure and mitigate risks to data and information assets

7.4 CO diagram

Figure 4 illustrates the service control process activities, associated tasks and work products.

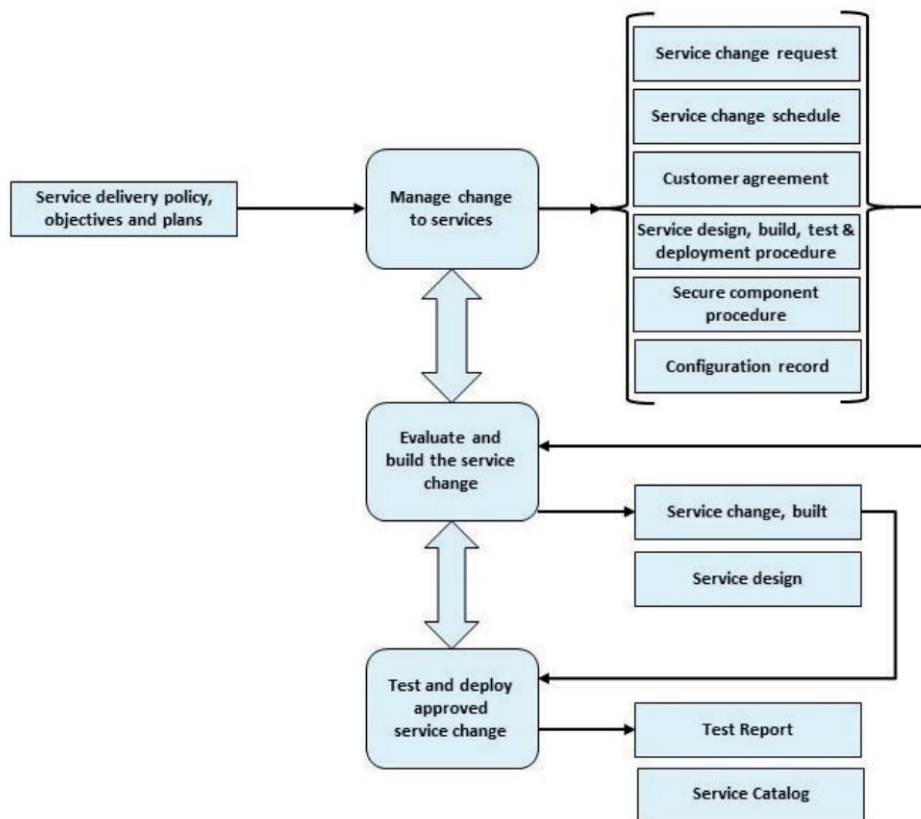


Figure 4 — Service control process diagram

7.5 CO activities

Service control has the following activities:

- CO.1 Manage change to services (see [Table 6](#));
- CO.2 Evaluate and build the service change (see [Table 7](#)); and
- CO.3 Test and deploy approved service change (see [Table 8](#)).

7.5.1 CO.1 Manage change to services

NOTE See [Table 14](#) for a description of work products and suggested content.

Table 6 — CO.1 Task list

Role	Task List	Input Work Products	Output Work Products
CM MGT	CO.1.1 Define what constitutes a pre-approved, emergency and normal change to service(s) and the method to request a change.	<i>Service delivery policy, objectives and plan(s) [Approved]</i>	<i>Customer agreement [Approved] or if a new service [Draft]</i>
CM	CO.1.2 Define the service design, build, test & deployment procedure(s) including the service change request, service change schedule, emergency change procedures including the update of the configuration record. NOTE To create a service, the components of the service (hardware, software, infrastructure) can be created following the procedures defined in the Basic Profile of Software and Systems (ISO/IEC TR 29110-5-1-2:2011 and ISO/IEC TR 29110-5-6-2:2014, respectively).	<i>Service delivery policy, objectives and plan(s) [Approved]</i>	<i>Service design, build, test & deployment procedure(s) [Draft]</i> <i>Service change schedule [Draft]</i> <i>Service change request [Draft]</i>
SM MGT	CO.1.3 Approve the service design, build, test & deployment procedure(s).	<i>Service design, build, test & deployment procedure(s) [Draft]</i> <i>Service change schedule [Initial]</i> <i>Service change request [Draft]</i> <i>Configuration record [Stored]</i>	<i>Service design, build, test & deployment procedure(s) [Approved]</i> <i>Service change schedule [Updated]</i> <i>Service change request [Approved]</i> <i>Configuration record [Updated]</i>
MGT CM	CO.1.4 Identify service components associated with each service (hardware, software, human competencies, information).	<i>Service design, build, test & deployment procedure(s) [Approved]</i>	<i>Configuration record [Updated]</i>
CM SM	CO.1.5 Define and approve appropriate procedures to store and protect service components (i.e., entry to or exit from secure storage areas).	<i>Service delivery policy, objectives and plan(s) [Approved]</i>	<i>Secure component procedure [Draft, Approved]</i>

NOTE To apply DevOps to CO.1, focus on risk reduction using pre-approved changes. Pre-approval allows for automation which can increase the number of changes that are processed. Thus, the customer receives the improvements quicker, benefiting the business.

7.5.2 CO.2 Evaluate and build the service change

Table 7 — CO.2 Task list

Role	Task List	Input Work Products	Output Work Products
CM CUS SUP	<p>CO.2.1 Evaluate service change request including the current version of the service component(s).</p> <p>NOTE 1 The service change request includes the request for a new service.</p> <p>NOTE 2 Requests for change can come from any number of sources including but not limited to processes, customers, the organization and suppliers.</p> <p>NOTE 3 Pre-approved changes complete the full process before designation as a pre-approved change to ensure the procedures associated with the change are viable and valid.</p>	<p><i>Service change request [Draft]</i></p> <p><i>Configuration record [Stored]</i></p>	<p><i>Service change request [Approved or Rejected]</i></p>
CM	CO.2.2 Update the service change schedule to reflect proposed deployment date.	<i>Service change schedule [Initial]</i>	<i>Service change schedule [Updated]</i>
CM CUS	CO.2.3 Use appropriate design activities to fulfil the change requirements.	<i>Service design, build, test & deployment procedure(s) [Approved]</i>	<i>Service design [Approved]</i>
PT	CO.2.4 Build the change.	<i>Service design [Approved]</i>	<i>Service change, built [Initial]</i>

NOTE To apply DevOps principles to CO.2, focus on automating the design process through an automated request fulfilment process, the provision of elastic capacity and automated monitoring of services.

7.5.3 CO.3 Test and deploy approved service change

Table 8 — CO.3 Task list

Role	Task List	Input Work Products	Output Work Products
CM CUS SUP	CO.3.1 Perform documented tests.	<i>Service design [Approved]</i> <i>Service change, built [Initial]</i> <i>Service design, build, test & deployment procedure(s) [Approved]</i>	<i>Service test report [Published]</i>
CM CUS	CO.3.2 Review test report based on agreed customer functionality and obtain approval to deploy the service change.	<i>Service change request [Approved]</i> <i>Customer agreement [Approved]</i> <i>Service test report [Published]</i>	<i>Service change request [Approved & Updated]</i> <i>Service test report [Published]</i> <i>Service change, built [Final]</i>
CM	CO.3.3 Review service change schedule ensuring the availability of resources to deploy the change.	<i>Service change schedule [Approved]</i>	<i>Service change schedule [Updated]</i>
PT CUS SUP	CO.3.4 Deploy the approved service change, as planned and documented. NOTE the outcome of this task is the new or changed service, available for use.	<i>Service design, build, test & deployment procedure(s) [Approved]</i> <i>Secure component procedure [Approved]</i> <i>Service change, built [Final]</i>	<i>Configuration record [Updated]</i> <i>Service catalogue [Updated]</i>
CM PT CUS SUP	CO.3.5 Review the results of the deployment and manage improvement, if necessary, to the service design, build, test & deployment procedures.	<i>Service design, build, test & deployment procedure(s) [Approved]</i> <i>Customer agreement [Approved]</i> <i>Supplier agreement [Approved]</i>	<i>Service design, build, test & deployment procedure [Updated]</i>

NOTE To apply DevOps principles to CO.3, focus on automating the testing and deployment process.

8 Service relationship process (RE)

8.1 Introduction

Relationship activities for the VSE require simplicity and openness. Typically, there is not a surplus of resources available to a VSE to have complicated processes. Relationships are defined, agreed and documented between the VSE and its customers, suppliers or other stakeholders. These agreements may be informal or they may be legally binding contracts. Contents of these documents will be based on organizational requirements.

To manage the relationship between the service provider and the customer or supplier, management may delegate some activities and tasks to one or more individuals who are competent in managing relationships. In some organizations, the person might be called the Relationship Manager (RM).

8.2 RE purpose

The purpose of the service relationship process is to maintain relationships with customers and the suppliers needed to support effective and efficient service delivery. This can be supported by

documented agreements for services (service catalogue, service level agreements and contracts), communication and feedback. These defined and managed relationships support efficient, effective and economical service delivery by ensuring the services provided match the communicated needs and expectations of customers.

8.3 RE objectives

RE.01 Define clear, mutually beneficial agreements between the VSE, its customers and suppliers

RE.02 Complete regular reviews with stakeholders to ensure current and future needs are met

8.4 RE diagram

Figure 5 illustrates the service relationship process activities, associated tasks and work products for the initial deployment of relationship process.

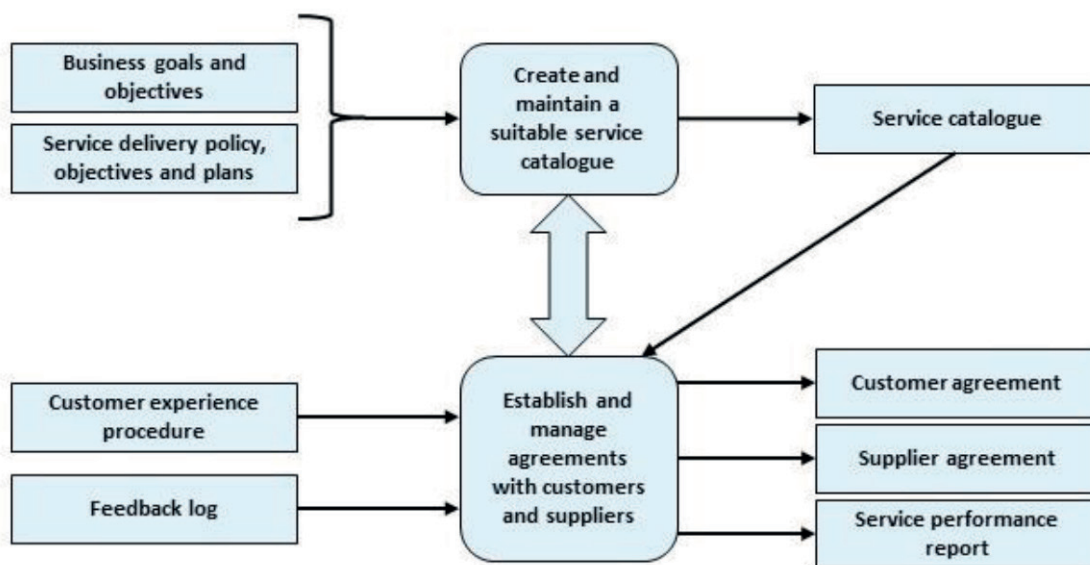


Figure 5 — Service relationship process diagram

8.5 RE activities

The service relationship process has the following activities:

- RE.1 Create and/or maintain a suitable service catalogue (see Table 9); and
- RE.2 Establish and manage agreements with customers and suppliers (see Table 10).

8.5.1 RE.1 Create and/or maintain a suitable service catalogue

NOTE 1 VSEs could need to manage multiple service catalogues, in accordance with the defined tasks.

NOTE 2 See [Table 14](#) for a description of work products and suggested content.

Table 9 — RE.1 Task list

Role	Task List	Input Work Products	Output Work Products
RM SM CUS SUP	RE.1.1 Draft a service catalogue for the VSE, including service performance measurements and consult with interested parties to ensure capacity to deliver and measure performance.	<i>Service delivery policy, objectives and plan(s) [Approved]</i>	<i>Service Catalogue [Draft]</i>
SM RM	RE.1.2 Approve and publish the service catalogue.	<i>Service Catalogue [Draft]</i>	<i>Service Catalogue [Approved]</i>
SM RMs CUS	RE.1.3 Review the service catalogue, as needed, to ensure defined services continue to meet customer requirements. NOTE Use a service change request approach to modify.	<i>Service Catalogue [Approved]</i>	<i>Service Catalogue [Updated]</i>

8.5.2 RE.2 Establish and manage agreements with customers and suppliers

Table 10 — RE.2 Task list

Role	Task List	Input Work Products	Output Work Products
RM SM CUS SUP	RE.2.1 Draft agreements with customers and/or suppliers to ensure understanding on delivery parameters and performance measures. NOTE If needed, discuss agreement feasibility with stakeholders (PT, SUP and others).	<i>Business goals and objectives [Approved]</i> <i>Service delivery policy, objectives and plan(s) [Approved]</i> <i>Service Catalogue [Approved]</i>	<i>Customer agreement [Draft]</i> <i>Supplier agreement [Draft]</i>
MGT SM CUS SUP	RE.2.2 Approve agreement(s). NOTE Approving parties are based on the content of the agreement.	<i>Customer agreement [Draft]</i> <i>Supplier agreement [Draft]</i>	<i>Customer agreement [Approved]</i> <i>Supplier agreement [Approved]</i>
RM SM CUS SUP	RE.2.3 Manage the relationship with the customer and supplier feedback and maintain the feedback log. NOTE GO.2.3 defines the approach.	<i>Customer experience approach [Approved]</i> <i>Feedback log [Maintained]</i>	<i>Feedback log [Updated]</i>
RM SM	RE.2.4 Report on service or supplier performance based on measurements described in the agreement(s).	<i>Customer agreement [Approved]</i> <i>Supplier agreement [Approved]</i> <i>Service performance report [Draft]</i>	<i>Service performance report [Approved]</i>
SM	RE.2.5 Modify agreement(s), based on feedback, following the task list beginning at RE.2.1.	<i>Customer agreement [Approved]</i> <i>Supplier agreement [Approved]</i>	<i>Customer agreement [Updated]</i> <i>Supplier agreement [Updated]</i>

9 Service incident process (IN)

9.1 Introduction

Many tasks are completed to deliver services to the customers, yet incidents will occur. The responsibility for managing incidents rests not only on the service provider (deploy good process to manage services) but also with the consumer of the service (report irregular functionality).

9.2 IN purpose

The purpose of the service incident process is to restore service to the business with minimal disruption or to prevent incidents from occurring. Furthermore, this process can be used to proactively prevent failure.

9.3 IN objectives

IN.01 - Prevent incidents to ensure services are available and delivered as agreed

IN.02 - Manage incidents, including communication, to maximize the service experience

9.4 IN diagram

Figure 6 illustrates the service incident process activities, associated tasks and work products.

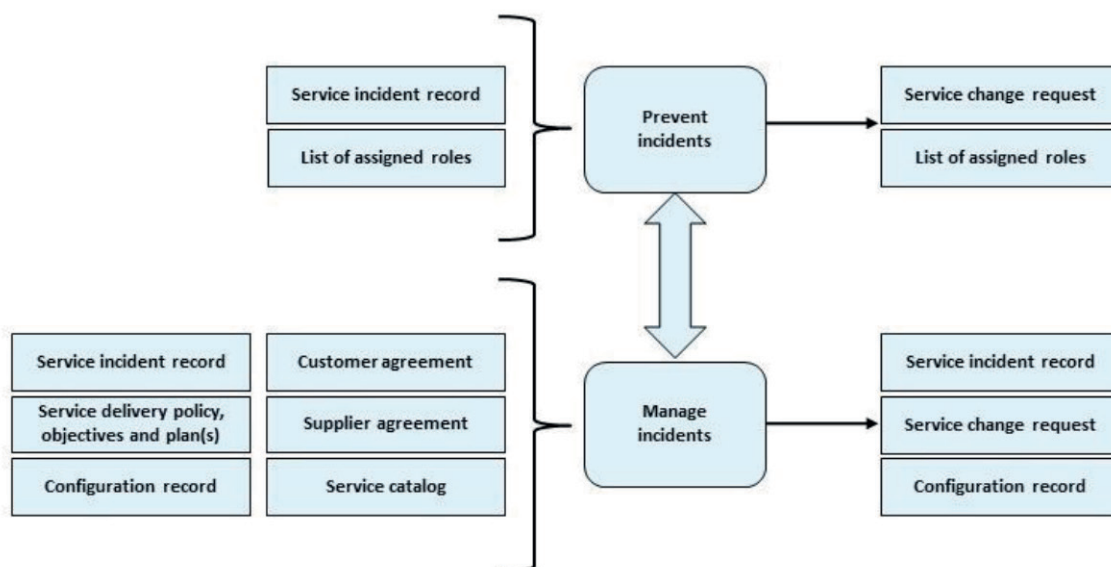


Figure 6 — Service incident process diagram

9.5 IN activities

- IN.1 Prevent incidents (see Table 11); and
- IN.2 Manage incidents (see Table 12).

9.5.1 IN.1 Prevent incidents

NOTE See [Table 14](#) for a description of work products and suggested content.

Table 11 — IN.1 Task list

Role	Task List	Input Work Products	Output Work Products
SM CUS SUP	IN.1.1 Train all parties (staff, suppliers, other stakeholders) to perform their assigned tasks.	<i>List of assigned roles [Approved]</i>	<i>List of assigned roles [Updated]</i>
SM CUS SUP	IN.1.2 Provide training or perform other actions so all affected parties remain competent for the accepted responsibilities.	<i>List of assigned roles [Approved]</i>	<i>List of assigned roles [Updated]</i>
SM CUS SUP	IN.1.3 Identify, prioritize and resolve potential issues that may lead to incidents to maintain defined and agreed service level requirements. NOTE Simple root cause analysis and the capture of mitigating actions is appropriate at this step (follow the Service Control process to develop and deploy the mitigating solution [use a service change request]).	<i>Service incident record [Opened]</i> <i>Customer agreement [Approved]</i>	<i>Service incident record [Updated]</i> <i>Service change request [Draft]</i>

9.5.2 IN.2 Manage incidents

Table 12 — IN.2 Task list

Role	Task List	Input Work Products	Output Work Products
PT CUS SUP	IN.2.1 Record all reported or identified incidents. NOTE Include information security incidents.	<i>Customer agreement [Approved]</i> <i>Supplier agreement [Approved]</i> <i>Service Catalogue [Approved]</i> <i>Configuration record [Updated]</i>	<i>Service incident record [Open]</i>
PT CUS SUP	IN.2.2 Classify incidents (actual or perceived failed component) with criteria agreed with customers linking the service incident record to other necessary records (change, configuration, other incidents). NOTE 1 Classification supports trend analysis and is used to manage the performance of components. NOTE 2 Incidents with significant impact require investigation for root cause and the development of a mitigating solution, which prevents or minimizes future occurrence (follow the Service Control process to develop and deploy the mitigating solution [use a service change request]).	<i>Service incident record [Updated]</i>	<i>Service incident record [Updated]</i> <i>Configuration records [Updated]</i> <i>If a mitigating solution is required:</i> <i>Service change request [Draft]</i> <i>...which will be managed by the Service Control process</i>
PT	IN.2.3 Investigate and notify affected parties, as agreed	<i>Service incident record [Updated]</i> <i>Service delivery policy, objectives and plan(s) [Agreed]</i>	<i>Service incident record [Updated]</i> <i>Standard communication as defined by the service delivery policy</i>
PT	IN.2.4 Restore the service and notify affected parties, as agreed.	<i>Service incident record [Updated]</i> <i>Service delivery policy, objectives and plan(s) [Agreed]</i>	<i>Service incident record [Updated]</i> <i>Standard communication as defined by the service delivery policy</i>
PT CUS SUP	IN.2.5 Close the Service incident record with the resolution and confirmation from affected parties. NOTE 1 Any other documents associated with the Incident are updated to reflect the outcome of the incident. NOTE 2 As a result of restoring service, typically by a temporary solution, a service change request can be submitted to develop and deploy a permanent fix. NOTE 3 A service change request is not required to restore a service.	<i>Service incident record [Updated]</i>	<i>Service incident record [Closed]</i> <i>If a permanent fix is required:</i> <i>Service change request [Draft]</i> <i>...which will be managed by the Service Control process</i>

10 Service Delivery roles

A role is described by a set of responsibilities, authorities and activities. As a reminder, a role may be held by a single person or a group, and a single person may have more than one role. Many of the roles in [Table 13](#) may be combined (i.e., the same individual may have the responsibilities of the Relationship Manager as well as the Service Manager). No matter the size or type of organization, the principle around separation of duties mitigates the risk of conflicting authorities and actions. For this reason, the Control Manager should not be combined with the Incident Manager. Lastly, at no time, should an

individual hold both a manager and practitioner role in the same area (i.e., the Control Manager and a change design, build or testing practitioner).

This is an alphabetical list of the roles, its abbreviations and suggested areas of competence. This list is shown as a three-column table for presentation purpose only.

Table 13 — Roles

Role	Abbreviation	Knowledge and Competence
Control Manager	CM	<p>Manages service change (oversees the Service Control process); is a direct report to the Service Manager or may be combined with the Service Manager duties.</p> <p>Areas of competence include:</p> <ul style="list-style-type: none"> — design service change models and workflows to mitigate the risk associated with service change; — design appropriate service release and deployment plans; — design and manage configuration items and service assets; — plan and manage support of service change tools/processes; and — work with other process managers and organizational leadership to ensure an integrated approach to managing service change.
Customer	CUS	<p>A person or organization that can or does receive a product or a service that is intended for or required by this person or organization.</p> <p>Areas of competence include:</p> <ul style="list-style-type: none"> — provide requirements for services; — represent users; — act on service reports; — suggest improvements to services; and — report failures.
Incident Manager	IM	<p>Manages the service incident lifecycle and, if appropriate, the Service Desk.</p> <p>Areas of competence include:</p> <ul style="list-style-type: none"> — design service incident procedures and workflows; — plan and manage support of incident tools/processes; — submit recommendations for improvements; — produce performance reports; — manage major incidents; — work with other process managers and organizational leadership to ensure an integrated approach to managing incidents.
Management of the VSE	MGT	<p>One or more members of the VSE who oversee(s) the effectiveness and efficiency of the organization; has a role and competence in governance, leadership, planning; ensures decisions have been followed, continue to be relevant and act when needed.</p>

Table 13 (continued)

Role	Abbreviation	Knowledge and Competence
Practitioner	PT	<p>Person or team performing the activities within one or more process areas. Practitioners should be properly trained (responsibility of the appropriate manager) with the necessary skills to perform the tasks as defined.</p> <p>Areas of competence include:</p> <ul style="list-style-type: none"> — verification of process activities ensuring correct completion; — assurance that no work is completed without proper authority; — communication to appropriate stakeholders on actions and decisions; and — monitoring and/or reviewing activities for improvement.
Relationship Manager	RM	<p>Develops and manages the Service Catalogue and customer/supplier relationships.</p> <p>Areas of competence include:</p> <ul style="list-style-type: none"> — identify customer needs and ensure they can be met; — create and maintain a service catalogue; — manage customer expectations, and track the “customer experience”; — create and maintain a constructive relationship with the customer and supplier; — identify changes in customer environment that may impact provided services; — negotiate service agreements with customer and suppliers; — ensure performance requirements can be met and measured; — oversee review meetings with the customer and supplier; — mediate conflict resolution between customer and service provider; and — work with other process managers and organizational leadership to ensure an integrated approach to managing relationships.
Service Manager	SM	<p>Provides leadership and direction within defined governance policies; is a direct report or peer to the highest level of the organization.</p> <p>Areas of competence include:</p> <ul style="list-style-type: none"> — ensure organizational strategy is reflected in the processes and activities of the VSE; — provide a direct link between business activities and VSE services; — define the policies, objectives and plans for service delivery; and — ensure continual improvement of policies, objectives, plans and services.
Supplier	SUP	<p>An organization or an individual that enters into an agreement with the acquirer for the supply of a product or service.</p> <p>Areas of competence include:</p> <ul style="list-style-type: none"> — capacity to support existing and new customers; — commitment to fulfil contractual obligations; — control and consistency of products or services provided to minimize variance and disruption; — viable financial health; — appropriate cost models; — compatible culture with customers; and — appropriate and agreed communication protocols.

11 Service Delivery Work Product Description

Table 14 is an alphabetical list of the input and output work products, its description, possible status codes and the source of the work products. These work products may be combined or subdivided as required by the VSE or its stakeholders.

Table 14 — Work product descriptions (alphabetical)

No.	Name	Description	Source
WP.01	Business goals and objectives	<p>Business goals and objectives originate within the governing body of the organization. These goals and objectives guide how that specific organization operates and makes decisions.</p> <p>If the VSE acting is acting as an internal provider of service to that organization, the goals and objectives will scope their activities accordingly.</p> <p>If the VSE acting is acting as external service provider, the VSE will use the goals and objectives to pursue appropriate commercial relationships.</p> <p>A copy of the business goals and objectives is readily available.</p> <p>Applicable status code: approved.</p>	Governance process
WP.02	Configuration record	<p>Configuration information (hardware, software, documents, etc.) can be stored in a simple document, spreadsheet or in a database.</p> <p>A configuration record provides information about:</p> <ul style="list-style-type: none"> — approved configuration(s) or configuration item(s); — information that may be captured includes: item description, date of service, unique identifier, type (hardware, software, document), status, owner, location; — status of proposed changes to the configuration; — implementation status of approved changes (pre-approved, emergency, normal); and — status of incidents. <p>Configuration records may be stored in a configuration management database (CMDB).</p> <p>Applicable status codes include: stored, updated.</p>	Service control process
WP.03	Customer agreement	<p>Describes the mutual acknowledgement of terms and conditions under which a working relationship is conducted.</p> <p>Each agreement may specify a customized way to meet customer needs, which is based on the published service catalogue.</p> <p>An agreement can be simple or more elaborate depending on the customer or the complexity of the services to be provided.</p> <p>The agreement should include:</p> <ul style="list-style-type: none"> — unique identifier; — documented form of approval (email, signature, etc.); — scope of service(s) to be provided; — key dates (start, review, end); 	Service relationship process

Table 14 (continued)

No.	Name	Description	Source
		<ul style="list-style-type: none"> — defined owner of the agreement for the VSE and customer; — customer requirements; <ul style="list-style-type: none"> — performance; — user interface; — functionality; — resources; — constraints; — regulatory / legal requirements; — communication methods; — performance measurement; — hours of service; — resources provided by each party; — charging methods, if applicable; — warranty information (guarantee of agreed performance); — copyright and licensing information / limitation; — acceptance criteria; — delivery / installation instructions; — change management and incident resolution procedures; — role of the customer; and — evidence of review and approval by authorized signatories. <p>Applicable status codes include: draft, approved, updated.</p>	
WP.04	Customer experience approach	<p>Develop guidance to manage compliments, complaints and general comments (e.g., receive, acknowledge receipt, record, investigate, provide response, escalate, and, if necessary, close). Maintain a log (see WP.06) for historical review.</p> <p>If documented in a feedback log, consider including:</p> <ul style="list-style-type: none"> — unique identifier; — contact details (Full name, address, phone numbers; email address); — client's company name and contact details; — special needs (Interpreter and language; TTY or other speech/hearing impaired requirements); — description and detail of the comment; — time and date of the interaction; — investigation outcome; and — signature and date. <p>Applicable status code: approved.</p>	Governance process

Table 14 (continued)

No.	Name	Description	Source
WP.05	Data and document management procedure	<p>A procedure defining how document/data are version controlled, stored, archived, updated, backed up, etc. This procedure applies to printed, electronic or web-accessible documents or data. Apply this procedure to all work products.</p> <p>The following should be included:</p> <ul style="list-style-type: none"> — unique identifier; — version of the document or data; — controls to prevent unauthorized changes; and — location of document/data. <p>Applicable status codes include: draft, approved.</p>	Governance process
WP.06	Feedback log	<p>Document that details the outcome of the customer experience approach or any other relevant communication with suppliers or stakeholders (see WP.04). These logs should be stored as configuration items (CIs) and managed as determined by business need.</p> <p>Applicable status codes include: maintained, updated.</p>	Governance process
WP.07	Improvement report	<p>This report contains results from the customer review of service performance, the internal review of VSE processes (including governance) and recommended actions for follow-on activities. This report should be produced at least annually and made available to customers, suppliers and management, as required.</p> <p>Content should include:</p> <ul style="list-style-type: none"> — unique identifier; — from the customers' perspective, assessment of performance and relevance of services; <ul style="list-style-type: none"> — results of service goals' achievement; — issues; — from the service provider perspective, assessment of usage and relevance of written policies and practices to support service delivery; and — defined improvement actions. <p>Applicable status codes include: draft, approved</p>	Governance process
WP.08	List of assigned roles	<p>Work product containing different approved roles for the VSE. Identify training and development requirements in this document. The following role should be included:</p> <ul style="list-style-type: none"> — Service Manager; <ul style="list-style-type: none"> — Service Management training; — competence within general activities of the ISO/IEC 29110 series. <p>See ISO/IEC 29110-5-3, Table 13 for content.</p> <p>Applicable status codes include: approved, updated.</p>	Governance process

Table 14 (continued)

No.	Name	Description	Source
WP.09	Secure component procedure	<p>Procedure that defines how authorized change components are securely stored and accessed. The following conditions should be included in the procedure:</p> <ul style="list-style-type: none"> — only successfully tested component(s) at the required performance level (as per the design) are stored; — steps to add, move, modify or remove the component; — authorization is required to add, move, modify or remove the component from the secured location. <p>Applicable status codes include: draft, approved.</p>	Service control process
WP.10	Service catalogue	<p>The service catalogue describes the services delivered by the VSE to its customers. The catalogue should contain the following:</p> <ul style="list-style-type: none"> — description of service; — service hours; — basic service quality measures; — how to use the service; — costs, if appropriate; — dependencies; and — applicable standards or policies. <p>NOTE The catalogue also describes how compliments, complaints and disputes are handled (see WP.04 Customer experience approach).</p> <p>Applicable status codes include: draft, approved, updated.</p>	Service relationship process
WP.11	Service change request	<p>To evaluate the needed / proposed change, a formal request should exist. If, by exception, the request is verbal, the person acting as the Control Manager should record the request.</p> <p>NOTE The service change request can be a paper document or an electronic record.</p> <p>A service change request should include:</p> <ul style="list-style-type: none"> — unique identifier; — purpose; — priority; — date needed; — impacted CIs, problem to be corrected or required functionality; — business impact and approvals; — contact information — scope; — status; — benefits, assumptions and constraints; and — cost. <p>Applicable status codes include: draft, approved, rejected, updated.</p>	Service control process

Table 14 (continued)

No.	Name	Description	Source
WP.12	Service change schedule	<p>Contains all the approved changes with their planned deployment date.</p> <p>NOTE The service change schedule can be a paper document or an electronic record.</p> <p>The service change schedule should include:</p> <ul style="list-style-type: none"> — change windows; — maintenance windows; and — key business events. <p>Applicable status codes include: draft, initial, approved, updated.</p>	Service control process
WP.13	Service change, built	<p>The physical results of the service design, build, test and deployment procedure. A master copy of service components and/or procedures to build the new/changed service should be securely stored enabling restoration, new deployments as well as a basis for improvements.</p> <p>Applicable status codes include: initial, final</p>	Service control process
WP.14	Service delivery policy, objectives and plan(s)	<p>A document defining business-based guidelines and objectives of service delivery, including the plans to implement the defined policies and objectives. Also included are appropriate information security measures.</p> <p>The policy should include:</p> <ul style="list-style-type: none"> — creation of a service catalogue; — a prioritization matrix for managing change and failure (based on criticality to the business and used to manage events); — change definitions (pre-approved, emergency, normal); — communication practices (written and/or verbal) to support transparency with the customer (when, how often, standardized messages, etc.) and managing the customer experience; <ul style="list-style-type: none"> — include standard communication around resolution of incidents, status of changes, status of service delivery; — information security measures (based on organizational risk tolerance and requirements); <ul style="list-style-type: none"> — include the confidentiality, integrity and availability measures to protect organizational data and information; and — review, at least annually, for continued feasibility. <p>NOTE The information security measures can include physical, technical and administrative controls.</p> <p>NOTE Document actions to show conformance to the policy and manage the records, according to business need.</p> <p>Applicable status codes include: draft, approved, updated.</p>	Governance process

Table 14 (continued)

No.	Name	Description	Source
WP.15	Service delivery scope	<p>The scope defines which services are provided and can also include exclusions. The scope includes:</p> <ul style="list-style-type: none"> — services offered; — boundaries of service delivery (by customer, by location, legal boundaries, etc.); and — technology used (servers, mainframes, desktops, application, networks, telecommunications, etc.). <p>Applicable status code: approved.</p>	Governance process
WP.16	Service design	<p>The design document, which is an outcome of the service design, build, test and deployment procedures (WP.16). The resultant service design should be stored and protected as a configuration item, therefore allowing repeatability of the design or as an information source when troubleshooting service performance.</p> <p>The service design should include:</p> <ul style="list-style-type: none"> — unique identifier; — date of issue and status; — scope; — issuing organization; — approval authority; — identification of tools, methods, and techniques; — schedules; — budgets and cost estimates; — resources and their allocation, including human resources, technical resources (infrastructure), and tools; — responsibilities and authority, including the senior responsible owner and immediate process or service owner; — risks and risk identification, assessment and mitigation activities; — quality assurance and performance measures; — training; and — change procedures and history. <p>Applicable status code: approved.</p>	Service control process
WP.17	Service design, build, test & deployment procedure(s)	<p>The document detailing the steps to design, build, test and deploy a service or parts of a service that meet customer requirements. The procedures should include:</p> <ul style="list-style-type: none"> — creating a service change request; — updating the service change schedule; — defining and managing emergency changes; and — removal of service(s) or service component(s). <p>This information will be specific to the operational procedures of each organization.</p> <p>Applicable status codes include: draft, approved, updated.</p>	Service control process

Table 14 (continued)

No.	Name	Description	Source
WP.18	Service incident record	<p>Contains the details of a service incident.</p> <p>The record should contain:</p> <ul style="list-style-type: none"> — unique identifier; — the contact details of the individual who reported the event; — the contact details of the individual or team who resolved the incident; — details of the incident and the impact on the service(s); — the potential CI; — priority; — steps taken to restore the performance, including the solution (see NOTE); — start and end dates; and — time to resolve the incident. <p>NOTE Incidents with significant impact require investigation for root cause and the development of a mitigating solution, which prevents or minimizes future occurrence (follow the Control process where necessary).</p> <p>Applicable status codes include: opened, updated, closed.</p>	Service incident process
WP.19	Service performance report	<p>A report to defined stakeholders, as agreed to timing ('normal' performance vs. major incident), content and delivery method.</p> <p>The report should include:</p> <ul style="list-style-type: none"> — unique identifier; — the performance of that period; — status of previous action items; and — proposed action items for the upcoming period. <p>Applicable status codes include: draft, approved.</p>	Service relationship process
WP.20	Service test report	<p>As per the design, the test results are documented and reviewed based on the defined performance criteria. Outcomes should be recorded and described in the published report as 'pass' or 'fail.'</p> <p>This report should include:</p> <ul style="list-style-type: none"> — unique identifier; — summary of test results; — testing levels and types of tests; — measurement system and interpretation of results; — errors and their resolution; and — test information (who performed, when data was collected, who interpreted, who validated...). <p>Applicable status code: published.</p>	Service control process

Table 14 (continued)

No.	Name	Description	Source
WP.21	Supplier Agreement	<p>Documented agreement between the VSE and a supplier describing the mutual acknowledgement of terms and conditions under which a working relationship is conducted.</p> <p>Each agreement may specify a customized approach to meet VSE requirements, which is based on the published service catalogue.</p> <p>An agreement can be simple or more elaborate depending on the supplier or the complexity of the services to be provided.</p> <p>Elements to consider, based on organizational requirements include:</p> <ul style="list-style-type: none"> — unique identifier; — a documented form of approval (email, signature, etc.); — scope of services to be provided; — key dates (start, review, end); — defined owner of the agreement for the VSE and supplier; — specification of delivered services/products; — terms and conditions; — pricing and charging methods; — list of deliverables (meeting customer requirements); — schedule; — acceptance criteria; — competency requirements for VSE and supplier; — communication methods; — standards and procedures to be followed; — types / frequency of reviews; — warranty, ownership, and rights of use for the acquired products; — proprietary rights; and — procedure for changing the agreement, exceptions, procedure for resolving disputes and closeout. <p>Applicable status codes include: draft, approved, updated.</p>	Service relationship process

12 Software tools requirements

There is no specific tool requirement to fulfil the requirements of the Service Delivery Profile. However, open-source or commercial products could support the deployment of these requirements. Typical desktop productivity tools (work flow, word processing, spreadsheet, database), will enhance the management of the necessary documents and records to support the process activities as well as support audit activities.

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- [4] ISO 10004, *Quality management — Customer satisfaction — Guidelines for monitoring and measuring*
- [5] ISO/IEC 12207, *Systems and software engineering — Software life cycle processes*
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- [7] ISO/IEC/IEEE 15289, *Systems and software engineering — Content of life-cycle information items (documentation)*
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- [20] ISO/IEC/TR 29110-5-6-2, *Systems and software engineering — Lifecycle Profiles for Very Small Entities (VSEs) — Part 5-6-2: Management and engineering guide: Generic profile group: Basic profile*
- [21] ISO/IEC 38500, *Information technology — Governance of IT for the organization*

