BEST PRACTICE

ITIL® 4

A Pocket Guide

Jan van Bon

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The ITIL story

ITIL has been the leading guidance for IT service management over the past three decades. Millions of practitioners worldwide have applied its guidance in their daily jobs, providing a structured approach to one of the most important support domains for modern business: the provision of information technology services for the improvement of business results.

In the modern digital business, the role of information technology (IT) has further increased and it has merged with many other domains. This emphasizes the role of IT even more. And with the acceleration of business change, IT itself needs to change even faster to support the business that it has merged with. This means that the IT service provider will have to apply Agile ways of delivering its contribution to the co-creation of value. In other words: it was time for a new edition of ITIL guidance.

In the first version of ITIL, from the end of the 1980's up to the turn of the century, the guidance was based on a long list of best practices that were documented in dozens of small books. Although the exact number of books is under some debate, the total library counted some 50 titles. This guidance largely focused on the support of technology.

In 2000-2001 the ITIL guidance was updated and documented in a set of two core books: ITIL Service Support and ITIL Service Delivery. In the

following years, additional guidance was published, but the two core books remained the authoritative references.

In 2007, the third version of ITIL was published: ITIL v3. It was built on the paradigm of a Service Lifecycle with five phases, and each phase was documented in a separate publication. These five core books were then updated in 2011 in a minor review of ITIL v3, with few differences. The ITIL v3 editions changed the focus from technology to services.

The pace of development in the IT industry in the last decade accelerated in such a way that a thoroughly redefined version of ITIL was required. It was not only technology and the role of IT in business that had made huge progress, but the practices used in the IT industry had also gone through some serious evolution, with Agile and DevOps approaches, cloud technology, and the merging of IT with many other domains being some of the most prominent features.

With the new ITIL 4, a major step has been taken to cover the latest developments. The ITIL 4 guidance supports modern ways of co-creating value in an active collaboration of stakeholders, using an Agile approach in a customer-focused setting. Its holistic approach not only underpins the management of IT services, but now also supports other domains, enabling the integration of IT with the business and with other support domains.

1 Introduction

Learning outcomes:

- Understand the purpose and components of the ITIL service value system.

Assessment criteria:

- Describe the ITIL service value system

The past decade has illustrated that delivering services has become the mainstream economic model. The merging of IT and business, and the increasing pace of development of technology, has created the need for a fully-fledged, strategic IT service management capability.

The digitization of companies and economies has made it clear that organizations must learn to deliver their IT-enabled services in a flexible way, combining Agile approaches with guarantees for predictability and stability. This places significant responsibility on the shoulders of IT service management and on its leading guidance, ITIL.

ITIL has provided leading guidance for IT service management for more than 30 years. ITIL 4 brings ITIL up-to-date by re-shaping much of the established practices in the wider context of customer experience, value streams, and digital transformation, as well as embracing new approaches such as Lean, Agile, and DevOps.

1.1 THE ITIL 4 FRAMEWORK

The key components of the ITIL 4 framework are the ITIL service value system (SVS) and the four dimensions model.

1.1.1 The ITIL service value system (SVS)

The **ITIL service value system** (SVS) is a model demonstrating how all the components and activities of an organization work together to facilitate value creation through IT-enabled services.

These components of the SVS include:

- the ITIL service value chain
- the ITIL practices
- the ITIL guiding principles
- governance
- continual improvement

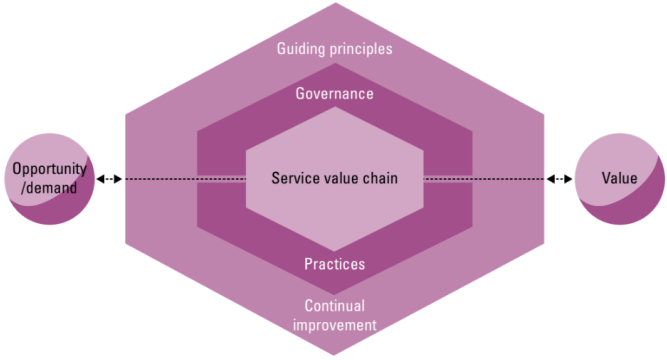

Figure 1. The ITIL service value system (SVS)

The **ITIL service value chain** is a set of interconnected activities that an organization performs in order to deliver a valuable product or service to its consumers and to facilitate value realization. It provides an operating

model for service providers that covers six key activities, applying practices to continually improve the enabled values.

The **ITIL practices** are sets of organizational resources designed for performing work or accomplishing an objective. Activities in the service value chain can be based on established practices.

The **ITIL guiding principles** are recommendations that can guide an organization in all circumstances, regardless of changes in its goals, strategies, type of work, or management structure. The ITIL guiding principles assure that the organization performs in a consistent, effective and efficient way.

Governance is the means by which an organization is directed and controlled. The organization's governance is based on a consistent set of guiding principles. Governance enables the organization to ensure that its operations are always aligned with its strategy.

Continual improvement is a recurring organizational activity performed at all levels to ensure that an organization's performance continually meets stakeholders' expectations.

Using all these components, the service provider can continually improve its services. Continual improvement is a core component of the SVS, as in previous versions of ITIL guidance. It is based on the continual improvement model (Figure 10) and supported by various ITIL practices.

1.1.2 The four dimensions model

In a holistic approach, ITIL 4 covers all four dimensions required for the effective and efficient facilitation of value for customers and other

stakeholders in the form of products and services. The SVS should be considered from all of these four dimensions:

- organizations and people
- information and technology
- partners and suppliers
- value streams and processes

These four dimensions should be managed in an integrated way, balancing their contribution to an effective SVS. The four dimensions are described in more detail in chapter 3.

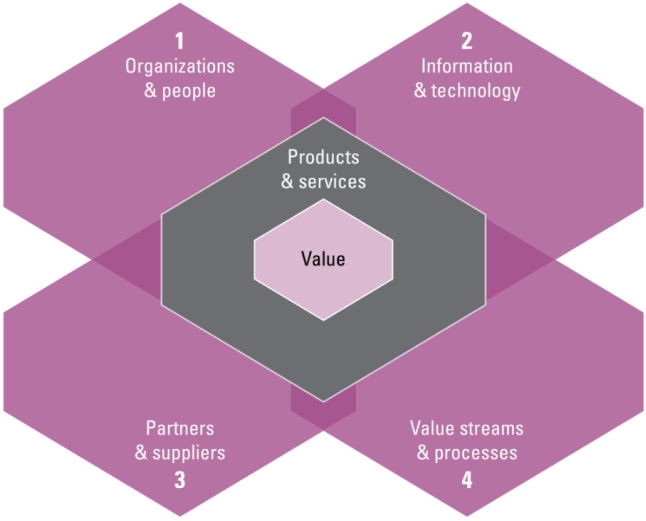

Figure 2. The four dimensions of service management

2 Key concepts of service management

Learning outcomes:

- Understand the key concepts of service management.

Assessment criteria:

- Recall the definitions of Service management, Customer, User, Sponsor, Service, Utility, Warranty.
- Describe the key concepts of creating value with services: Cost, Value, Organization, Outcome, Output, Risk, Utility, Warranty.
- Describe the key concepts of service relationships: Service offering, Service relationship management, Service provision, Service consumption.

Before describing how ITIL supports organizations to continually improve services and co-create value, the definitions of service management and value need to be clear.

> ***Service management**: A set of specialized organizational capabilities for enabling value for customers in the form of services.*

The purpose of an organization is to create value for its stakeholders.

> ***Value:** The perceived benefits, usefulness and importance of something.*

This introduces the following questions:

- What is the nature of value?
- What is the nature and scope of the stakeholders involved?
- How is value creation enabled through services?

2.1 VALUE CO-CREATION

Value can be subjective: the value is determined by the stakeholders.

Organizations increasingly recognize that value is co-created through an active collaboration between stakeholders, including the service providers and service consumers. Each stakeholder receives its own value in the interaction. The relationship between service provider and service consumer is mutually beneficial. An effective service value chain requires collaboration between providers and consumers.

After many years of focusing on operational excellence, the era of customer-focused service excellence has now arrived. Service delivery is increasingly becoming the core element in the economy. People are buying less and less 'pure' goods, and suppliers are increasingly packaging supplied goods into a service offering. The support that comes with that service has already revealed itself as a dominant differentiator for the success of organizations. This observation applies to both internal and external services.

In the economy this shift is indicated with Service-Dominant logic (S-D logic), as a successor to the Goods-Dominant logic (G-D logic) in which the transfer of goods played the main role. According to the S-D logic, service is the fundamental basis for all value-sharing[1].

1 [Ref.: Service-dominant logic 2025]

G-D logic focuses on value creation in the transfer of goods (value-in-exchange). S-D logic focuses on value creation in the use of resources (value-in-use), where value is co-created by providers and consumers.

2.2 STAKEHOLDERS

There are various stakeholders involved in the co-creation of value: service providers, service consumers, and others. The ITIL 4 guidance is applied to the way *organizations* can improve their contribution.

> ***Organization**: A person or a group of people that has its own functions with responsibilities, authorities, and relationships to achieve its objectives.*

An organization can be anything, ranging from a single individual or team, up to a complex set of organizational structures in a network.

2.2.1 Service providers

Service provider is a role performed by an organization in a service relationship to provide services to consumers. A service provider co-creates value with the consumer, by offering services.

Service providers can be external or internal to the consumer's organization. An internal service provider is part of the same organization as the consumer. External providers often provide their services as a commercial offering to various consumers. The provider-consumer model can be applied to create complex supply chains, service networks, or service ecosystems.

A service provider needs to have a clear understanding of who its consumers are.

2.2.2 Service consumers

When receiving services, an organization takes on the generic role of the **service consumer**. Service consumers collaborate with service providers in the co-creation of value.

For the generic role of service consumer, ITIL 4 makes a distinction between three separate roles: customer, user and sponsor.

> ***Customer**: A person who defines the requirements for a service and takes responsibility for the outcomes of service consumption.*
>
> ***User**: A person who uses services.*
>
> ***Sponsor**: A person who authorizes budget for service consumption.*

These roles can be used in any combination. In any service relationship it is important that these roles are fully identified, as this will assist with communications and the management of stakeholders. Each role could have different expectations of the services and the expected value from them.

2.2.3 Other stakeholders

There can be many other stakeholders that play a role in value creation:

- **Shareholders** are interested in the success of the organization, often in terms of financial benefits.
- **Employees** of the service provider may be interested in other value, including professional growth, financial compensation and sense of purpose.
- The **community** may have relations with the services. This may cover charity, environmental factors, employment, social impact, etc.

2.3 PRODUCTS AND SERVICES

> ***Service**: A means of enabling value co-creation by facilitating outcomes that customers want to achieve, without the customer having to manage specific costs and risks.*

Services are based on one or more products.

> ***Product**: A configuration of an organization's resources designed to offer value for a consumer.*

The organization's resources include the four dimensions of service management: organizations and people, information and technology, partners and suppliers, value streams and processes. The service provider enables access to these resources, to be used by the consumer in such a way that these resources are valuable to the consumer. Goods may be transferred to the consumer as part of the service.

Products may not be exclusive to consumer groups: they can be used for different purposes and for different consumer groups.

Products are usually only partially visible to the consumer.
E.g., a network provision can be part of the offered product, but consumers will not be able to see the network itself, they will only be able to use it for their own purposes.

2.3.1 Service offerings

A service provider and a consumer can agree on services that are offered by the service provider.

> ***Service offering**: A formal description of one or more services, designed to address the needs of a target consumer group.*

A service offering may include:

- a wide variety of **goods** (e.g. a laptop), to be supplied to a consumer
- **access to resources** (e.g. a network or storage, possibly through a laptop), granted or licensed to a consumer under agreed terms and conditions
- **service actions** (e.g. user support), performed to address a consumer's needs

The service offering is often demonstrated to consumers in the format of a **service catalogue**.

Services are offered to target consumer groups, internal or external to the service provider organization. The service provider is responsible for the resources made available to the consumer, goods to be supplied, and service actions to be performed.

2.4 SERVICE RELATIONSHIPS

Any and all organizations are both service provider and service consumer. An organization will assume the role of provider or consumer within the context of a given relationship with another organization.

When provisioning services, an organization takes on the role of the service provider. The provider can be external to the consumer's organization, or they can both be part of the same organization.

> ***Service provision**: Activities performed by an organization to provide services.*

The service provider:

- manages the **resources** that are *configured* to deliver the service
- provides **access** to these resources for users
- fulfils the **agreed service actions** (support)

Service provision may also include the supplying of **goods**.

The service provider will also have to manage the service performance (*service level management*), and to *continually improve* the services provided, to maintain the relationship and the value (co-)created.

The consumer consumes the services provided by the service provider.

> ***Service consumption**: Activities performed by an organization to consume services.*

The consumer:

- manages its **own resources** that are needed to use the service
- performs **service actions**, including **utilizing the provider's resources**, and requesting service actions to be fulfilled

The consumer may also receive (acquire) **goods**, delivered by the provider as parts of the service.

Service providers and service consumers have a relationship, based on the services provided by the provider to the consumer. This leads to a service relationship between providers and consumers.

> ***Service relationship**: A cooperation between a service provider and service consumer, including service provision, service consumption, and service relationship management.*

This relationship needs to be managed.

> ***Service relationship management**: Joint activities performed by a service provider and a service consumer to ensure continual value co-creation based on agreed and available service offerings.*

These activities include regular meetings over the delivered services, discussing new options, preparing for future needs, adjusting the service level agreements/contracts, etc. In business-to-consumer services, this may include surveys and other marketing research.

2.4.1 The service relationship model

The basic unit of one provider and one consumer can be repeated over and over again, to create endless chains and networks of provider-consumer relationships. For each unit, the provider creates new resources for the consumer or modifies existing resources.

In these service ecosystems, the term provider indicates a *relative* position: each consumer on its turn is a provider when that consumer adds value to the received services and provides it to the next position in the chain or network. This way, complex ecosystems of provider-consumer relationships can be created (Figure 3).

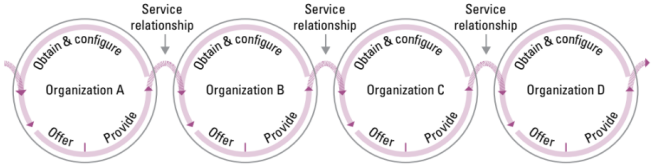

Figure 3. The service relationship model

2.5 VALUE

Value is co-created in a service relationship between service consumer and service provider, as well as other stakeholders that are part of the relevant service relationship.

Value is only achieved when relationships have more positive effects than negative. This is a balance between desired outcomes and the associated costs and risks.

From the consumer's perspective a service represents potential value, in terms of potential benefits at given costs and risks. On the one hand, the consumer has to define these benefits. Benefits can relate to gains created and/or pains relieved[2]. On the other hand, the consumer has to define the financial costs of the service (costs of service, risks imposed, etc.). A positive balance will lead to a service relationship with the service provider.

The relationship between the service and the desired outcomes is expressed in terms of the utility and warranty of the service.

2.5.1 Outcomes

The direct result of an activity is an output.

> ***Output**: A tangible or intangible deliverable of an activity.*

Outcomes result from the use of these outputs (see Figure 6). The service provider produces outputs that help its consumers to achieve these outcomes.

> ***Outcome**: A result for a stakeholder enabled by one or more outputs.*

To a large extent outcomes determine the actual value for the consumer. And as value is determined by the consumer, outcomes should also be determined by the consumer.

Service providers should spend serious amounts of effort in understanding the nature of the consumer's needs and business characteristics, so that they are able to contribute to the desired outcomes for the consumer.

2 [Ref.: Value Proposition Design]

2.5.2 Costs

The co-creation of value often involves a transfer of money from the consumer to the provider. This is income for the provider, and cost for the consumer.

> ***Cost**: The amount of money spent on a specific activity or resource.*

Often, costs are financial, but they may also be expressed in non-financial ways, e.g. as time that is spent or avoided by resources. Ultimately, all costs can be expressed in terms of money, so they can be compared and used in a business case for the service consumer, weighing *costs removed* and *costs imposed*:

- A service may **remove costs** from the service consumer: reduced costs of staff, technology, and other resources, which the consumer does not need to provide any more.
- A service may also **impose costs** on the service customer: a price may be charged by the service provider, and there are other costs such as staff training, costs of network utilization, procurement, etc., which come with the service.

2.5.3 Risks

A service may also introduce new risks imposed on the service consumer, resulting from using the service.

> ***Risk**:*
>
> 1. *A possible event that could cause harm or loss, or make it more difficult to achieve objectives.*
> 2. *Uncertainty of outcome that can be used in the context of measuring the probability of positive outcomes as well as negative outcomes.*

From the customer's perspective, as with costs, risks can be removed as well as imposed. The consumer should weigh *risks removed* and *risks imposed* in the business case of the service proposition:

- A service may **remove risks** from the service consumer: failure of the consumer's infrastructure or lack of consumer's staff will be avoided (or mitigated), through the use of the service provider's more reliable resources.
- A service may **impose risks** on the service consumer: the provider's resources may fail or experience security breaches.

These risks need to be balanced with the net result of costs removed and costs imposed. This requires the customer *and* the provider to both clearly understand the impact of the service on the user's business. The consumer contributes to this by clearly articulating the service requirements and its desired outcomes, defining the associated critical success factors (CSFs) and constraints. The service provider and the service consumer cooperate in the management of risks, balancing their interests.

The provider should also have access to the necessary resources of the consumer during the service relationship.

2.5.4 Utility and warranty

The evaluation of the ability of a service to provide the desired outcomes requires an assessment of the utility and warranty of the service. Both utility and warranty are essential to the creation of value.

> ***Utility**: The functionality offered by a product or service to meet a particular need.*

Utility can be summarized as 'what the service does' and can be used to determine whether a service is '*fit for purpose*'. This requires that a service either supports the business activities of the consumer or removes constraints from the consumer - or both.

> ***Warranty**: The assurance that a product or service will meet agreed requirements.*

Warranty relates to how the service performs: is it '*fit for use*'? Like for utility, this can be expressed in terms of **service levels** that should be agreed and aligned with the needs of consumers, including:

- availability
- capacity
- security
- continuity

A service may be said to provide acceptable assurance, or *warranty*, if all defined and agreed conditions are met.

3 The four dimensions of service management

Learning outcome:

- Understand the four dimensions of service management.

Assessment criteria:

- Describe the four dimensions of service management: organizations and people, information and technology, partners and suppliers, value streams and processes.

There are four dimensions required for designing and delivering services (as shown in Figure 4). Each of these four dimensions represents a *perspective*, used for a holistic approach to service management:

1. organizations and people
2. information and technology
3. partners and suppliers
4. value streams and processes

The represented perspectives are relevant to the whole SVS, including the service value chain and all ITIL practices. A holistic approach requires all four dimensions to be addressed in service management initiatives. The dimensions may overlap to some extent: there are no sharp boundaries.

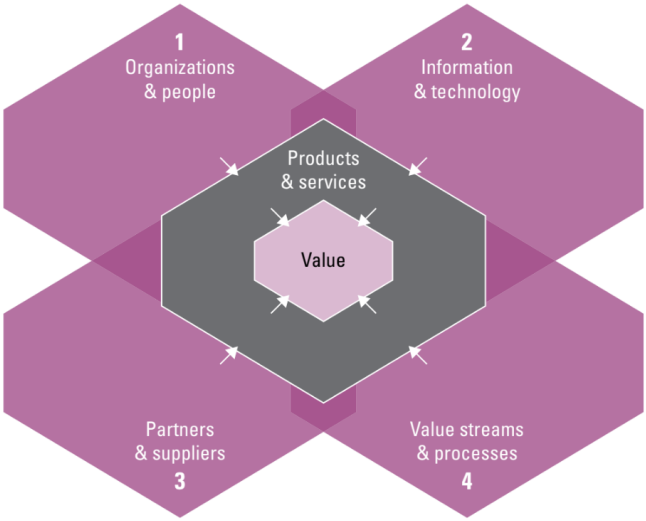

Figure 4. The four dimensions of service management (graphic based on ITIL 4)

3.1 ORGANIZATIONS AND PEOPLE

The organizations and people dimension of a service covers roles and responsibilities, organizational structures, culture, and skills and competencies of staff, all of which are required to conduct the activities of the service provider.

The availability and competence of workforce by themselves are not sufficient. The organization also needs to make sure there is an adequate culture that enables continual improvement across the organization. Culture covers various perspectives, including:

- shared values and attitudes
- leaders who champion and advocate these values

- communication between various stakeholders
- trust and transparency

Aspects to be covered in the organizations and people dimension include:

- management and leadership styles
- skills and competencies
- communication and collaboration
- T-shaped individuals, covering broad knowledge combined with a deep specialization[3]
- common objectives and goals
- collaboration with other teams, breaking down silos

The organizations and people dimension relates to the SVS, covering the following aspects:

- roles and responsibilities
- formal organizational structure
- organizational culture
- required staffing and competencies

These aspects relate to creating, improving and delivering services and they need to be addressed when managing and improving the SVS at all levels.

3.2 INFORMATION AND TECHNOLOGY

The technology applied by service providers covers two types. First, it covers the technology elements in the service, used by the consumer. In IT services this can include applications, networks, databases, cloud computing etc.

3 Alternatives are Pi-shaped individuals who have two adjacent fields of expertise, I-shaped individuals who do not possess a broad knowledge, and generalists who are commonly referred to as Dash-shaped people. [Ref.: A Primer on the T-professional, 2017]

The technology also encompasses the internal technological infrastructure that is required to *manage* these IT products. This second type of technology includes workflow management tooling, communication systems, knowledge bases, a configuration management database (CMDB) and inventory systems, cloud solutions, and many more.

> ***Cloud computing**: A model for enabling on-demand network access to a shared pool of configurable computing resources that can be rapidly provided with minimal management effort or provider interaction.*

Architecture specifies how the technology should be selected and designed. The skills required to manage the technology should be available from within the service provider's staff. Technology may also be influenced by the organization's culture or nature.

The service provider also requires information about the technology used in providing the services. This information should effectively and efficiently support the applied technology, in terms of:

- availability
- reliability
- accessibility
- timeliness
- accuracy
- relevance

Security or compliance goals often specify the requirements for this information.

The information and technology dimension relates to the SVS, covering the following aspects:

- information and knowledge
- technologies required
- relationships between different components of the SVS

Organizations should consider the information created, managed, and used by services and the technologies that enable and support these services, when managing and improving the SVS at all levels.

3.3 PARTNERS AND SUPPLIERS

Service providers cooperate with partners and suppliers in the design, development, deployment, delivery, support and/or continual improvement of services. This cooperation requires contracts and other agreements.

All of these suppliers and partners need to be integrated, to create a well-balanced service for the customer. This can be achieved through service integration and management.

Integrated services can be managed, using the role of a **service integrator** to ensure that service relationships are properly coordinated.

The role of service integrator may be kept within the organization, but it can also be delegated to a trusted partner.

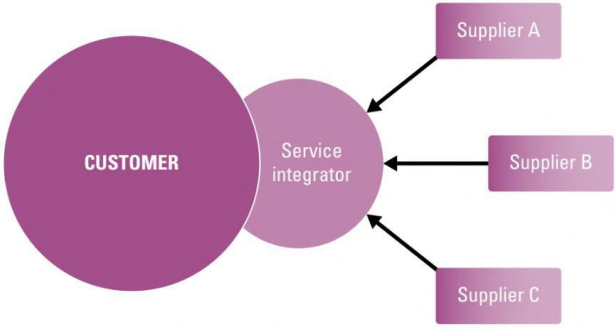

Figure 5. Service integration and management

In its sourcing strategy, an organization can apply various considerations that are based on its goals, culture and business environment, including:

- **Strategic focus**: be careful not to outsource strategic resources.
- **Corporate culture**: how is working with external parties perceived and how can external parties be part of the organization's culture.
- **Resource scarcity**: sourcing may resolve a shortage of internal resources.
- **Cost concerns**: external resources may be more cost-effective.
- **Subject matter expertise**: activities that are not core may be outsourced; some special expertise may be too expensive to maintain internally.
- **External constraints**: policies may prohibit the outsourcing of specialized activities, e.g. security tasks; alternatively, they may force the organization to use external resources.
- **Demand patterns**: seasonal fluctuations or other constraints may create a case for temporary external resources or service providers.

When relating the partners and suppliers dimension to the SVS, the following aspects should be considered:

- relationships with other organizations
- contracts and agreements
- service integration and management

Partners and suppliers are involved in different phases of services and, therefore, they should be considered when managing and improving the SVS at all levels.

3.4 VALUE STREAMS AND PROCESSES

The value streams and processes dimension defines the activities, workflows, controls, and procedures needed to achieve agreed objectives. It is concerned with how the various parts of the organization work in an integrated and coordinated way to enable value creation through products and services.

In practice, the generic service value chain (Figure 9) can follow different patterns, called value streams.

> ***Value stream**: A series of steps an organization undertakes to create and deliver products and services to consumers.*

Value streams combine the organization's value chain activities. They are specific for given situations and goals, but they may all be examples of the same service value chain.

Value streams should be aimed at maximizing value-adding activities and eliminating waste (non value-adding activities).

Value streams not only apply to the whole service provider organization, they also apply to individual services and products. For each service and product, the following questions should be answered:

- How does the service work: what is its generic delivery?
- Which value streams are involved?
- Who, or what, performs the required service actions?

Value streams can be improved by means of well-defined processes (see Figure 6), which facilitate productivity within and across organizations.

> ***Process**: A set of interrelated or interacting activities that transform inputs into outputs.*

A process turns defined inputs into defined outputs, and it defines the sequence of actions and their dependencies.

Figure 6. A process

When relating the value streams and processes dimension to the SVS, the following should be considered:

- define activities and workflows
- determine service integration and management
- enable value creation

This dimension is applicable to the SVS in general, as well as to specific products and services, and should be addressed when managing and improving the SVS at all levels.

3.5 EXTERNAL FACTORS

The four dimensions of service management are influenced by various external factors. These can be summarized in the PESTLE[4] model:

- **P**olitical factors, e.g. changes in laws and regulations, trade agreements or government provisions.
- **E**conomic factors, e.g. interest rates, international trade agreements or inflation.
- **S**ocial factors, e.g. public opinion, lifestyle or demographic factors.
- **T**echnological factors, e.g. innovations and trends in the use of communication devices.
- **L**egal factors, e.g. new privacy laws.
- **E**nvironmental factors, e.g. energy or waste management issues.

4 Also called PESTEL