Federal ICT Strategy 2016–2019

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Finance FDF
Federal IT Steering Unit FITSU

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Foreword

Ladies and Gentlemen,

Information and communication technologies (ICT) are one of the most important mainsprings of social, economic and political activity. In line with their fundamental importance, the Federal Council assumed strategic responsibility for the usage of ICT under the revision of the Federal Information Technology Ordinance in 2011.

In the first strategy period (2012–2015), the steering and management of ICT were strengthened, a portfolio management tool was introduced at federal level, the standard ICT services were developed, the infrastructures were modernised and mobile working became increasingly supported.

The ICT strategy for 2016 to 2019 will build on this. Its focal points include the establishment of consistent portfolio management at all levels and of architecture management as well as implementation of the federated data centres, that was conceived in the previous strategy. Furthermore, governance and management of ICT should be consolidated and they should be centred on ensuring successful project management and efficient operations. Finally, modernisation is planned

for internal service provision, which should be pursued with a new sourcing strategy and through complementary services that meet requirements. The aim of this ICT strategy is to continue to guarantee cost effectiveness and to increase the efficiency of administrative processes over the next four years. In achieving this, new technologies and rising cost pressure will present both a challenge and an opportunity at the same time.

In public administration, ICT have become indispensable. They form the basis for process modernisation throughout the administrative units. They support cooperation with the cantons, communes, general public and the private sector. In this way, the ICT strategy contributes significantly to shaping the future Swiss information society in step with the Strategy for Digital Switzerland and the associated eGovernment Strategy Switzerland.

Implementing the strategy requires commitment and vision from all managers and employees as well as the willingness to continue to work together constructively. Only in this way can the set targets be achieved.

Eveline Widmer-Schlumpf
Head of the Federal Department of Finance
Bern, December 2015

Introduction

Nowadays, governments and public administrations can no longer fulfil their mission and tasks without the use of information and communications technology (ICT). Therefore steering and management of ICT as a crucial resource is and remains a priority.
Based on Articles 5 and 14 of the Federal Information Technology Ordinance (FITO)[1], the Federal Council lays down the Federal ICT Strategy. The strategy adopts the perspective of the entire Federal Administration and

– is aligned with the Federal Council's objectives for the legislative period and the Federal Administration's business targets;
– defines other directives on the use and development of ICT in the Federal Administration that supplement the legal requirements and the Federal Information Technology Ordinance; and
– contributes to the implementation of other Federal Council strategies.

This ICT strategy shows how the use of ICT in the Federal Administration should develop during the strategy period from 2016 to 2019.

The strategy itself is preceded by a vision for the long-term direction of ICT use in the Federal Administration (chapter 1). Based on that vision, this document defines general principles (chapter 2) and describes three strategic directions (chapter 3). Each of these directions contains statements of intent (goal), defines strategic objectives and includes topical action areas for guiding the implementation of this strategy. Appendix A defines the planning areas. Strategy implementation is managed via the master plan, which is referenced in Appendix B.

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[1] SR 172.010.58, Ordinance on Information Technology and Telecommunications in the Federal Administration (Federal Information Technology Ordinance, FITO).

1 Vision

The vision describes a target that the Confederation's ICT function should aim to achieve over the long term.

Business-oriented
The ICT services for the Federal Administration are orientated toward the business objectives and achieve a high degree of effectiveness and economic efficiency through their support of business processes. They facilitate the day-to-day work and offer a level of security that is adapted to a risk-based evaluation.

Reliable
Administrative units (service procurers) and service providers can rely on each other. Service procurers receive the agreed ICT services in line with their requirements and, where comparable, at market conditions in terms of quality, timeliness, cost and security.

Integral
From an integral perspective, standards, shared platforms and information models form the basis of connected business processes at all administrative levels and units, including partners located in Switzerland as well as abroad.

Focused
The ICT services of the Federal Administration are focused on the missions and capabilities covered by the legal basis of the administrative units. Unwanted redundancies are eliminated and ICT services of both internal partners and the private sector are used.

2   Principles

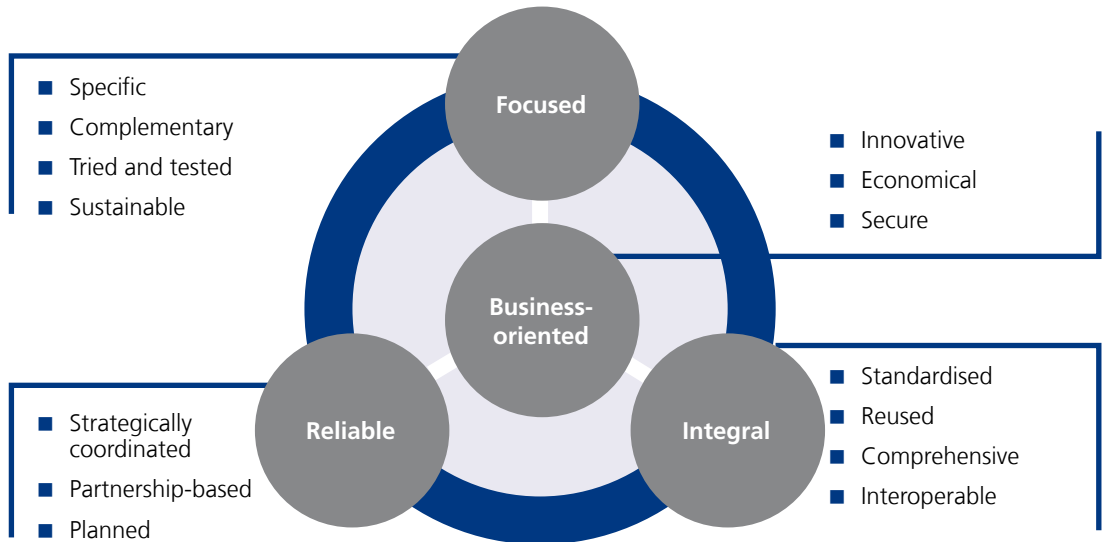The following principles reinforce the vision and guide the actions of all those involved.

- Specific
- Complementary
- Tried and tested
- Sustainable

Focused

- Innovative
- Economical
- Secure

Business-oriented

- Strategically coordinated
- Partnership-based
- Planned

Reliable

Integral

- Standardised
- Reused
- Comprehensive
- Interoperable

Figure 1: Vision and principles

2.1   Business-oriented

Innovative

Service procurers and service providers cooperate in the development of solutions, enabling the administrative units to meet their business objectives and to support innovation in their business processes.

Economical

The economic efficiency of both the business processes and ICT services should be maximised whilst at the same time minimising the corresponding risks[2]. These objectives are planned, managed and reviewed over the entire life cycle of the ICT systems[3] from both the business as well as the technical perspective. The risks and the economic efficiency from the viewpoint of external parties, such as cantons, communes, companies and citizens are also taken into account.

Secure

Based on reliable risk analyses, data protection and information security are ensured by appropriate[4] technical and organisational measures[5]. The administrative units and ICT service providers are responsible for the required ICT security[6].

2.2   Reliable

Strategically coordinated

All ICT strategies subordinate to the Federal ICT Strategy follow the vision, adhere to the principles and actively support the implementation of the Federal ICT Strategy.

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[2]   Cf. Directives on the Confederation's Risk Policy of 24 September 2010.

[3]   The life cycle of the ICT systems covers the stages ‚plan', ‚build' and ‚run' (incl. decommissioning).

[4]   „Appropriate" means balancing security against functionality, costs and usability.

[5]   Cf. Model for ICT Security in the Federal Administration of 1 March 2015 and the Federal Council directives on ICT security in the Federal Administration of 1 July 2015.

[6]   Including business continuity management (BCM) in accordance with no. 17 „Securing operation" of the rules on „Basic ICT Security" in the Federal Administration.

Partnership-based

The administrative units and service providers work in partnership by promoting long-term, stable and trusting collaboration. They honour agreements, ensure transparency and allow each other sufficient room for manoeuvre.

Planned

Administrative units plan their medium- and long-term demand for ICT services together with internal and external service providers.

2.3 Integral

Standardised

Service procurers and service providers ensure uniformity and compliance with standards. For that matter, service providers advise the administrative units and propose solutions.

Reused

For economic reasons, the re-use of existing solutions must be ruled out before a new solution is purchased or developed. The reuse of available ICT solutions takes precedence over commissioning bespoke ICT solutions. In business processes spanning several organisational units, the same information may be needed by several administrative units. Multiple entries of information and the maintenance thereof should be avoided where allowed by existing laws and regulations. Where there is no legal basis for the shared use of information, such basis should ideally be created.

Comprehensively designed

The enterprise architecture of the Federal Administration describes the interaction of business activities with ICT solutions and the relationships between the business and ICT layers. It supports cross-organisational collaboration, specifically for creating cross-departmental synergies in order to use resources efficiently and effectively.

Interoperable

By imposing open, product-neutral and freely available standards, interoperability can be ensured and independence of individual suppliers or products achieved.

2.4 Focused

Specific

Internal ICT service providers focus their development services on specific[7] high-quality services by focussing these services on the government's remit at federal level.

Complementary

Internal ICT service providers maintain mutually complementary services that correspond with their core expertise.

Tried and tested

The Federal Administration employs tried-and-tested ICTs for business-critical ICT services. New technologies are to be used in areas where they create business value.

Sustainable

The Federal Administration seeks out ICT products and services that are economic, environmentally friendly, that are not health damaging and are produced in a socially responsible manner.

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[7] „Specific" means based on the Federal Administration's business activity and mission needs.

3 Strategic direction

3.1 S01 – Business-aligned ICT

3.1.1 Goal

ICT usage is consistently geared to business needs. The administrative units and their partners receive ICT services that meet their requirements with regards to timeliness, security, economic efficiency and quality[8]. The ICT sourcing strategy defines guidelines for internal service provision and for procurement of external services.

The Federal Chancellery and the departments shape the alignment of their ICT to their respective business goals independently. They plan, build and maintain their business applications based on business architectures.

In order to achieve these business goals across organisational units, the General Secretaries Conference (GSC) assesses the priorities of ICT investments from the perspective of the entire Federal Administration[9].

The overall structure is defined by the planning areas of the Federal ICT Strategy (see appendix A). In order to achieve additional synergies, other overarching planning areas will be examined and eventually established. Cross-organisational cooperation as a whole is strengthened.

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[8] The various aspects of these requirements can, however, be weighted differently, in line with the respective government's mission area.

[9] In exercising the GSC's competence in accordance with Article 15 of the FITO.

3.1.2 Objectives

Objective 1
"Cross-organisational[10] cooperation"
In the Federal Administration, cross-organisational synergies are exploited and conflicts arising from the cross-organisational use of ICT are resolved.

Objective 2
"Business architectures and applications"
Business architectures and information models are developed and continuously maintained within the planning areas of the departments and Federal Chancellery. The focal points, scope and level of detail are based on the needs of the business processes and related business applications.

Objective 3
"ICT projects"
ICT projects are governed and managed successfully (scope, schedule, quality, finances and staffing)[11].

Objective 4
"Procurement"
The procurement processes for services and goods are executed faster and are easier to manage for all ICT projects and requesting offices.

Objective 5
"Confederation-wide business support processes"
The Federal Administration's future platforms for business support processes and their corresponding business applications will be ready for use by 2023. They will enable the necessary consolidation and migration of existing business applications of said support processes away from bespoke business support process systems that are no longer supported.

The following partial objectives have been achieved:
– The operating model for the civilian and military business support process systems has been decided.
– Data migration has minimised redundancies.
– By using shared platforms for business support processes, synergies have been exploited.

Objective 6
"Standard ICT services"
Commonly used ICT services are consolidated and have an acceptable cost-benefit ratio. ICT services, which are to be consolidated are defined selectively based on the priorities and consolidated requirements of the administrative units. A *medium-term roadmap* for the optimisation, further development and implementation of the existing standard ICT services is published.

3.1.3 Implementation action areas
– Creation of new overarching planning areas to increase synergies;
– Starting from 2016, implementation of the strategy "eGovernment Switzerland" within the Federal Administration[12];
– Cross-departmental decisions on ICT usage;
– Regulations on ICT sourcing within the Federal Administration;
– Steering and management of ICT projects;
– Procurement of services and goods.

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[10] Cross-organisational" means comprising all of the departments and administrative units of the central Federal Administration (based on the scope of application of the FITO described in Article 2).

[11] This includes timely termination if it becomes apparent during the release of a project phase that the objectives of the project contract cannot be met.

[12] Cf. also the framework agreement under public law „E-Government Switzerland from 2016".

3.2 S02 – Steering and managing ICT

3.2.1 Goal
The existing *ICT governance and management system* will be optimised and focusses on the business goals. It is aligned with the "New Management Model for the Federal Administration (NFB)".

As service procurers, the federal departments and the Federal Chancellery define their ICT demand and needs in their respective planning areas. For standard ICT services, the role of the service procurer will be assumed centrally by the Federal IT Steering Unit in consultation with the departments and the Federal Chancellery[13].

On the one hand, this optimises the impact of ICT governance. An Integral ICT planning schedule strengthens ICT steering mechanisms permanently and provides a reliable basis for decision-making. The maturity level of the IT organisation and its capabilities is gradually increased and its development is made more transparent and measurable.

On the other hand, ICT management is integrated into the Federal Administration's new management model. In this way, the Federal Council, the Federal Chancellery and the departments receive ICT management information that is tailored to their particular needs, specifically information on ICT risks, costs and demand for funding.

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[13] In exercising the FITSU's competence, particularly in accordance with Article 17 of the FITO.

3.2.2   Objectives

Objective 1
"ICT governance and management system"
ICT governance and management are optimised and focussed on the alignment of ICT with business. Investments in ICT are part of every administrative unit's investment portfolio; they help both to increase the efficiency with which the Federal Administration's missions are fulfilled and to effectively implement ICT strategies[14].

Objective 2
"Integral ICT planning"
The ICT steering instruments related to strategic and architectural planning are established throughout all planning areas. Harmonised planning and portfolio management processes are implemented, and the agreed upon planning products to steer and manage ICT are defined and regularly maintained.

Objective 3
"ICT directives"
The purpose, scope as well as the area of application of all ICT directives are comprehensibly and unambiguously documented. They are actively managed as part of ICT policy management. They are adhered to and enforced at all ICT management levels.

Objective 4
"Satisfaction of all parties involved"
The management of the Federal Administration strives for collaborative partnerships between the administrative units and ICT service providers which should result in the mutual satisfaction of all those involved with regards to the services rendered as well as the ICT management processes.

3.2.3   Implementation action areas
– Strengthening of the Federal Administration's ICT management system by clearly assigning duties, competencies and responsibilities;
– Establishment of integral ICT planning throughout all planning areas;
– Decentralised planning of the replacement and maintenance of business applications;
– Establishment of harmonised ICT portfolio management processes at all levels of the Federal Administration;
– Regulations on the governance of ICT architecture;
– Further development of strategic ICT controlling;
– Consolidation of ICT directives at all levels and planning areas.

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[14]   These are in particular the Federal ICT Strategy and the departmental ICT strategies.

3.3   S03 – Provision of ICT services

3.3.1   Goal

The services offered by internal ICT service providers complement each other and have consistent aims. Services are provided on a cross-departmental basis. In this way, synergies and economies of scale are exploited and the operational costs per service unit are permanently reduced. Internal production will be increasingly complemented by ICT services that are procured externally.

The overarching management of service integration will produce a comprehensive integrated ICT service portfolio, including both services procured externally and those produced within the Federal Administration.

Scalable cloud infrastructures create new opportunities for increased efficiency and new service offerings.

3.3.2 Objectives

Objective 1
"Marketable costs for comparable services"
Internal ICT service providers seek to set prices for their ICT services that are comparable with prices of equivalent ICT services available in the private sector. When comparing internal and external ICT services, differences in the composition of the cost structure are highlighted and other conditions, such as security, are considered.

Objective 2
"Federated data centres"
Data centre capacities are to be planned and built in such a way that the Confederation's own data centre infrastructure primarily maintains business-critical information and computing capacities.

Objective 3
"Complementary ICT service delivery"
The services delivered by internal ICT service providers are aligned and complementary. The integrated Confederation-wide ICT service portfolio is subject to a cross-departmental governance and planned accordingly.

3.3.3 Implementation action areas
– Benchmarks for internal ICT service providers;
– Creation of the data centre federation[15];
– Complementary internal ICT service delivery;
– Creation of the integrated ICT service portfolio;
– Development of the strategy "Confederation Networks".

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[15] Press release „Federal Council approves federated data centre conception for the Federal Administration" of 2 July 2014 (not available in English)

Appendix A: Planning areas

| Planning area FC | Planning area Dept. A | Planning area Dept. B | · · · | Planning area Dept. G | Planning area "eGovernment Switzerland" |

Planning area "Confederation-wide business support processes"

| Finances | Personnel |
| Facilities | Logistics |

Planning area "Confederation-wide basic ICT services"

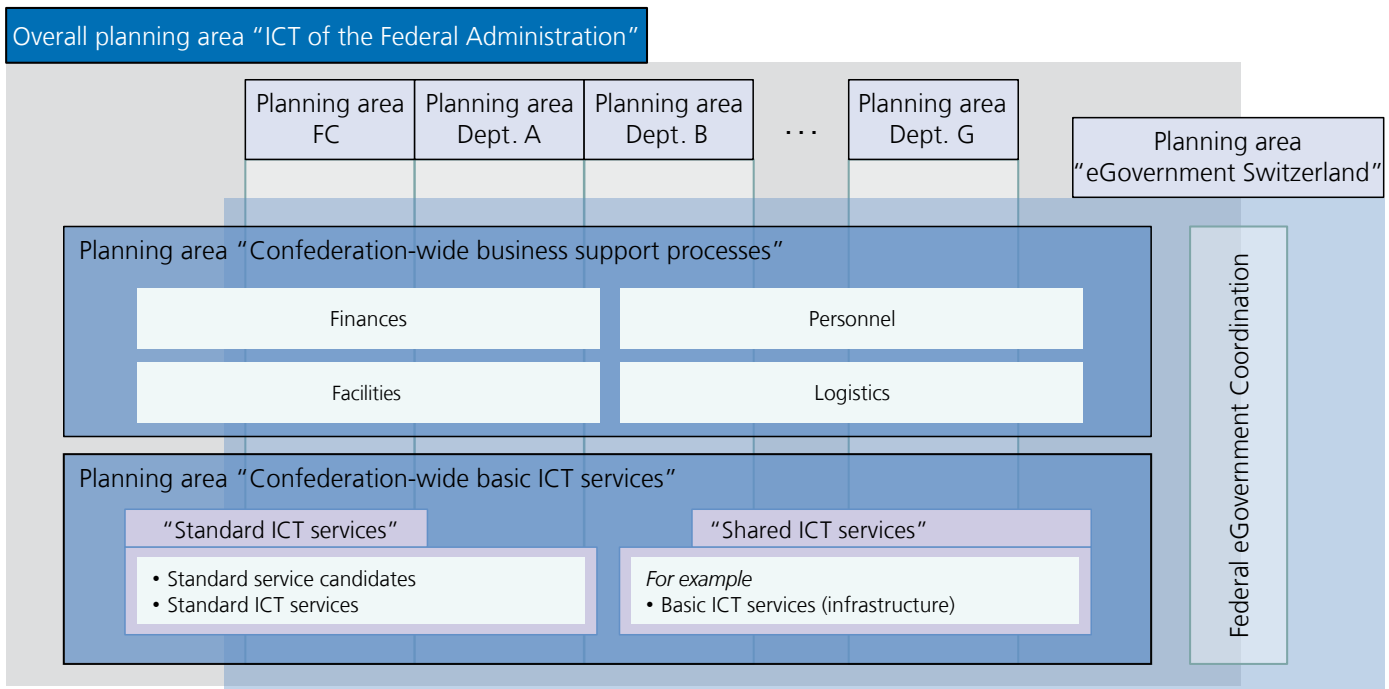| "Standard ICT services" | "Shared ICT services" |
| • Standard service candidates
• Standard ICT services | *For example*
• Basic ICT services (infrastructure) |

Federal eGovernment Coordination

Figure 2: The centrally defined planning areas of the 2016–2019 ICT strategy and overlaps among them (depicting the areas of coordination in ICT steering).

The Federal Council establishes *centrally defined planning areas of the Federal ICT Strategy* as a framework for governing ICT throughout the Confederation. Planning areas are an organisational concept which aims to simplify the complex aspects of cooperation and coordination within the federal ICT function by defining zones of coordination and clarifying interfaces in between. The ability of the responsible parties for ICT planning to effectively act on their role is thus strengthened.

A.1   Principles for all planning areas

For each planning area, there is a responsible party which undertakes ICT planning (i.e. strategy and architecture planning) within this planning area, develops the corresponding ICT plans[16] and coordinates those with the adjacent planning areas. All parties in

charge of related planning areas are equally responsible for this coordination.[17] for each planning area, defining the planning area's boundaries and relations with other planning areas. In addition, the ICT strategy should be further detailed by architectures in each planning area in order to sufficiently specify strategic initiative and project baselines for implementation.

For this purpose, all downstream architectures must be oriented toward the overarching enterprise architecture of the Federal Administration[18]. A focal point of enterprise architecture planning is the in-depth analysis of ICT initiatives against requirement categories, such as economic efficiency, security

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16 These are the „ICT master plan", the main planning product of Strategic IT Planning (SIP) and the „ICT architecture road-maps" produced through Enterprise Architecture Planning (EAP, see also Fig. 3).

17 In certain cases, the ICT strategy of a planning area can be replaced with a „strategic base architecture" (SIP product, volume B II), particularly for horizontal planning areas not directly related to the administration's core business activities (i.e. mission-neutral).

18 This is known as federal enterprise architecture (FEA). It is the primary instrument for ensuring the comprehensively designed and coherent use of ICT throughout the Federal Administration (based on the corresponding principle).

and interoperability. Important preconditions are thus created for both identifying potetial synergies and being able to assess the organisational and technical feasibility of projects. Figure 2 depicts the central planning areas of Confederation-wide ICT steering, specifically:

– The overall planning area "ICT of the Federal Administration", from a whole-of-government perspective, i.e. the subject of this Federal ICT Strategy.
– The Federal Chancellery and the federal departments form the vertical planning areas, i.e. those planning areas are defined by the organisational structure of the Federal Administration. Primarily, they ensure that the use of ICT is aligned to business needs and they cover all ICT planning aspects not expressly assigned to a different planning area.
– The horizontal planning areas with overarching responsibility (Confederation-wide business support processes and Confederation-wide basic ICT services).
– The external planning area "eGovernment Switzerland", which is defined by the corresponding eGovernment Strategy Switzerland. Planning is the responsibility of the respective eGovernment bodies, parties and actors. For other government bodies, the "Federal eGovernment Coordination" serves as the link to the federal level.

A.2 Planning area "ICT of the Federal Administration"

The contents to be planned within the planning area "ICT of the Federal Administration" are:

– policy areas and directives for the entire Confederation;
– the organisation for steering and managing ICT at the level of "whole of Federal Administration" (including Confederation-wide ICT governance bodies);
– centrally managed ICT funding;
– centrally managed programmes and projects.

The Federal IT Steering Unit (FITSU) is responsible for the overall planning area "ICT of the Federal Administration" (Figure 2) and defines ICT directives for the entire Confederation as part of this strategy (in accordance with Art. 17 para. 1 let. d of the FITO).

A.3 Planning areas of the Federal Chancellery and Departments

The business requirements for ICT are consolidated in the planning areas of the Federal Chancellery and departments, and any planning content either not planned within the overall planning area "ICT of Federal Administration" or not assigned to subordinate administrative units through departmental ICT strategies, is developed here. These include in particular:

– local policy areas and directives (based on legislative provisions or superordinate directives; examples are departmental architectures and standards);
– the own ICT-organisation, including bodies at the departmental level;
– programmes or projects, managed at the departmental level.

In addition to the centrally defined planning areas, the departments can define *decentralised* planning areas for the administrative units in their ICT strategies. As the Confederation's primary mission executors, federal offices essentially plan their own business architecture and support for their business processes in the form of ICT solutions. The Federal Chancellery or the respective federal department is responsible for the vertical planning areas (Figure 2).

A.4 Planning area "Confederation-wide business support processes"

In the planning area "Confederation-wide business support services", ICT for supporting business processes, namely for finances, personnel, logistics and facilities, are planned and managed. ICT forms an independent support process[19].

The horizontal planning area "Confederation-wide business support processes" (Figure 2) is the responsibility of the offices that are in charge of the corresponding processes. These are the Federal Finance Administration (FFA), the Federal Office of Personnel (FOPER) and the Federal Office for Buildings and Logistics (FOBL) in the administrative area, and the Federal Office for Defence Procurement (armasuisse) in the military area.

[19] Represented as the subject of this strategy the overall planning area „ICT of the Federal Administration".

A.5 Planning area "Confederation-wide basic ICT services"

The following content is planned and managed in the planning area "Confederation-wide basic ICT services":

– in the standard ICT services sub-area, both the (operational) standard ICT services and the candidates for standard ICT services;

– in the shared ICT services[20] sub-area, other basic ICT services, as designed through any form of Confederation-wide governance[21].

The Federal IT Steering Unit (FITSU) is responsible for the horizontal planning area "Confederation-wide basic ICT services" (Figure 2).

A.6 Planning area "eGovernment Switzerland"

This external planning area is defined by the eGovernment Strategy Switzerland. The "eGovernment" planning area overlaps with all other planning areas insofar as the use of ICT in the Confederation's mission areas has to be coordinated with government levels of the cantons and communes. This is coordinated by the authorities responsible of the Federal Administration in collaboration with the "Federal eGovernment Coordination". Responsibilities are governed by the eGovernment Strategy Switzerland and the "eGovernment Switzerland Framework Agreement".

A.7 Decentralised, horizontal planning areas

Overarching responsibilities and areas of cooperation in ICT planning are represented by means of horizontal planning areas. The centrally defined horizontal planning areas are described as Confederation-wide (see Figure 2). In addition, other horizontal planning areas can be defined in a decentralised manner.

This primarily concerns mission-related, *horizontal planning areas for a specialist remit* which can be defined in a decentralised manner by the departments. The offices responsible for these planning areas steer and manage cooperation and coordination with other units within the Federal Administration or other authorities in Switzerland. To support cross-organisational cooperation within the Federal Administration and between the Confederation and the cantons, specific specialist communities can also be set up with respect to the ICT planning for individual mission areas.

Examples of decentralised, horizontal planning areas for a specialist remit may include the ICT supporting geographical or statistical information, records management and archiving, and – in the context of eGovernment – law enforcement, or veterinary medicine[22].

Responsibility for the decentralised, horizontal planning areas for a specialist remit (not shown in Figure 2) lies with the administrative units assigned to the missions and business activities in question on the basis of legislative provisions.

A.8 Planning levels and products

The ICT planning developed in all centrally defined planning areas covers both the strategy and architecture levels. The medium- and long-term products of Strategic IT Planning (SIP) and Enterprise Architecture Planning (EAP) in the individual planning area are included in a rolling ICT plan.

The Federal Chancellery and departments also align their own ICT strategy with the Federal ICT Strategy and draw up an "ICT master plan". At the EAP level, "ICT architecture roadmaps" are developed in individual planning areas to describe the strategic transitions required to achieve the desired target states. The contents of these architecture roadmaps shall be coordinated across all of the planning areas within the scope of

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[20] This sub-area includes in particular shareable ICT platform or infrastructure services (i.e. infrastructure-as-a-service and platform-as-a-service cloud levels) and potentially other shareable ICT services and functions (e.g. the software-as-a-service cloud level).

[21] This can deviate in several aspects from the governance model for standard services (i.e. centrally managed by FITSU).

[22] These examples are by no means exhaustive; the criteria for setting up these planning areas must be assessed individually taking into account the particular features of the specialist nature in question, including mission subsidiarity designs across the different levels of Switzerland's government system.

Confederation-wide ICT steering and, where necessary, with relevant decentralised planning areas.

Figure 3 below shows these two levels and the main products of ICT planning:
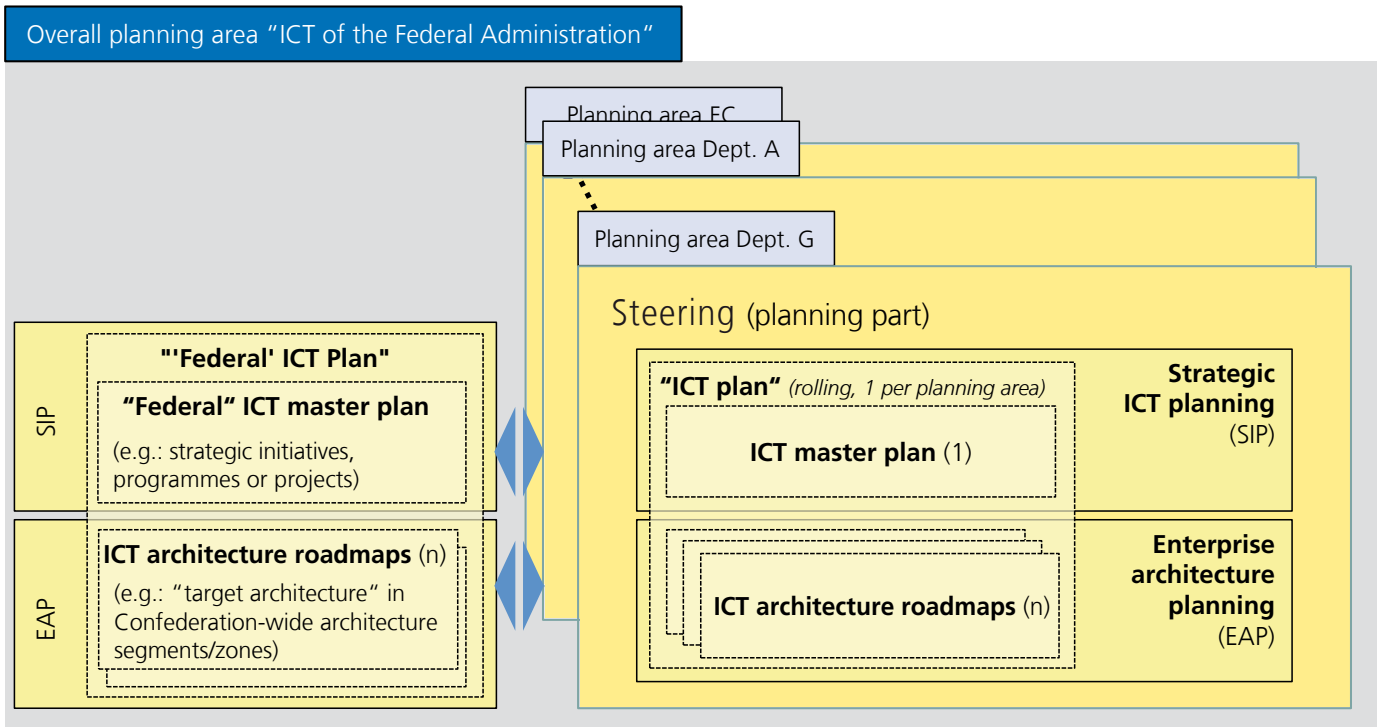

Figure 3: The planning part of ICT steering is made up of the strategy and architecture planning levels, the primary planning products of which are the strategic ICT master plan and the ICT architecture roadmaps.

Appendix B: Master plan

The master plan at Confederation level shows how the Federal ICT Strategy is implemented. It is an integral component of the strategy, is maintained as a separate document and is updated periodically.