Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Council

September 2021

Federal Digitalisation Strategy for 2020–2023

Strategy for the Digital Transformation and Use of Information Technology within the Federal Administration

Contents

Introduction

This strategy was adopted by the Federal Council on 3 April 2020. On 1 January 2021, the Federal Administration Information Technology Ordinance was merged with the Ordinance of 25 November 2020 on the Coordination of the Digital Transformation and ICT Steering in the Federal Administration (DTIO, SR 172.010.58), which resulted in a corresponding adaptation of this. The Federal Digital Transformation and ICT Steering Council (FDTC) did not feel the need for any material adjustments, nor did the higher-level Conference of Secretaries General (CSG) require them. In order to distinguish the current strategy, which takes into account the additional provisions now contained in the DTIO, from the previous strategy, the revised version is now called the digitalisation strategy (and no longer the ICT strategy). The new title also better reflects the Federal Council's current mandate of developing this strategy and encouraging the digital transformation.

Based on Article 13 of the Ordinance on the Coordination of the Digital Transformation and ICT (DTIO; SR 172.010.58), the Federal Council's strategy for digitalisation and information technology, which

- considers the Federal Administration as a whole;
- is aligned with the Federal Council's objectives for the legislative period as well as with the operational objectives of the Federal Administration;
- builds on existing legal requirements and DTIO provisions by providing additional specifications on the use of ICT and the development of information technology within the Federal Administration;
- helps to advance other Federal Council strategies, particularly the Digital Switzerland strategy and the eGovernment strategy.

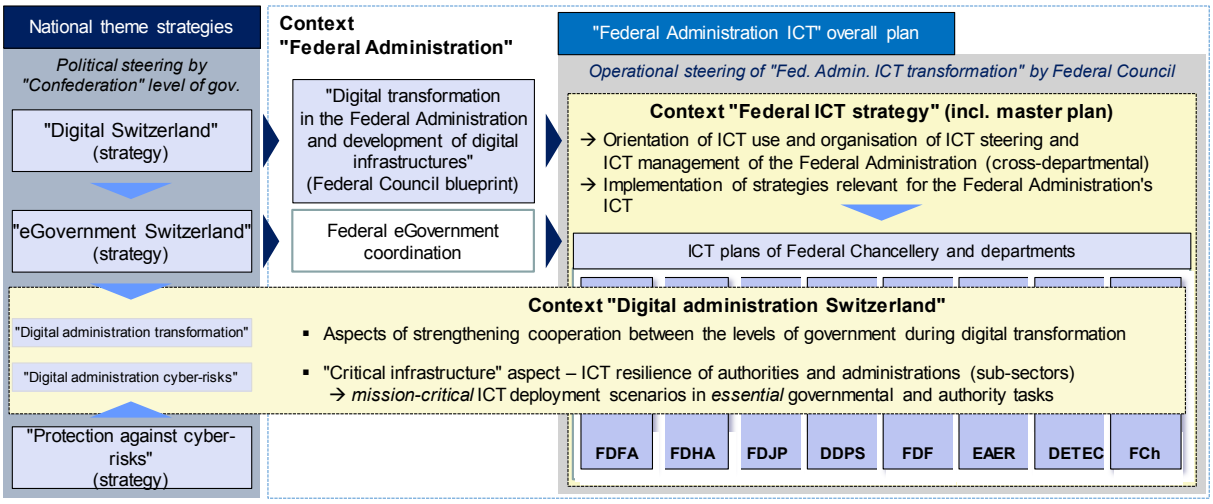

Figure 1: Integration of the Federal Digitalisation Strategy (strategy context)

This digitalisation strategy shows how information and communication technology should be organised and used within the Federal Administration during the strategy period from 2020 to 2023.

As an introduction to the strategy, Chapter 1 presents the digital transformation blueprint, which provides a long-term vision for ICT. The Federal Council adopted this blueprint in January 2019.

Chapter 2 forms the actual core of the digitalisation strategy. It describes the four strategic thrusts, each with their own purpose/impact, areas of action and alignment goals.

Chapter 3 confirms the principles already in effect for ICT use, which guide the actions of all players.

Appendix A provides an overview of important principles, namely the digital transformation working hypotheses on which the digitalisation strategy is based (Appendix A.1), the strategic initiatives as an instrument for cross-departmental planning (Appendix A.2) and the planning areas used to structure ICT planning and linking activities throughout the Federal Administration (Appendix A.3).

Strategy implementation is steered via the master plan. Supplementing the orientation goals in chapter 2, the master plan (Appendix B) formulates specific, verifiable implementation objectives within the framework of the strategic initiatives.

1 Digital transformation blueprint

The digital transformation has created many expectations both in and outside the Federal Administration. Against this backdrop, the Federal Council adopted the 'Blueprint for the digital transformation within the Federal Administration and the development of digital infrastructures'[1] in January 2019. This blueprint is intended to provide the Federal Administration with a frame of reference that may be used to achieve its overarching policy and operational objectives in the digital field.

A key issue for this digitalisation strategy is the question of the changes needed to gear federal information technology towards future processing needs and to provide optimal support for government processes in the digital transformation. That is why the digitalisation strategy is based on the aforementioned blueprint.

It identifies four key objectives:

1. Service innovation

   Administrative and government services for outsiders are designed to cater to the actual needs of clients, providing them with a secure single point of contact. This allows them to enter important data only once, gain access to corresponding portals or applications using single sign-in, find a reply and solution to their service needs as quickly as possible from a single source without having to know the internal processes and responsibilities. In addition, clients will always have a clear overview of processing status.

   The service must be available 24/7 and this should enable administrative procedures to be completely eliminated. An end-to-end process design from the service user's perspective is essential. As part of the next phase, the digital transformation must lead to new or more integrated and automated services for clients.

2. Process innovation

   Processes will be simplified as much as possible (fewer process loops and waiting times) and designed seamlessly; individual steps that are currently still required as part of the paper process will be completely eliminated. Wherever possible, both production and quality control will be automated, which increases efficiency and eases the burden on process participants.

   The necessary process and data flows – across departments and offices – must be ensured by means of an appropriate enterprise architecture.

3. Management and organisational innovation

   Existing organisational structures, which are often hierarchical and arranged in compartmentalised fashion, will be adapted using the new approaches made possible by linking and integral overall management (transparency through data evaluation) in a bid to increase effectiveness and agility. This will also require modern personnel development and management.

[1] Enclosure to the press release of 30.01.2019 'Federal Council approves blueprint for digital transformation within the Federal Administration', https://www.newsd.admin.ch/newsd/message/attachments/55503.pdf (available in French, German, Italian)

4. ICT innovation

   Here the aim is to provide user-friendly, accessible, resource-optimised, reusable and scalable digital services. These will be developed through close collaboration between those responsible for service, operational, managerial and organisational aspects.

The blueprint also states that the following must be taken into account when implementing these key objectives:

a. Client centricity

   The design will take the situations and needs of clients (personal and process) into account.

b. Incentive system

   The general conditions will be improved to create incentives for organisational units and individual employees to press ahead with the digital transformation.

c. Change management

   Change management activities must ensure that the organisational culture can guide or adapt to the digital transformation trend. Suitable initial and ongoing training and awareness-raising activities will be organised.

d. Cost transparency

   For the sake of transparency, a full-cost analysis, proof of benefits and corresponding key performance indicators will be provided for all projects wherever possible. Over time, digitalisation and the digital transformation must lead to a reduction in costs and human resources without impairing the quality and breadth of service, or significantly higher service requirements must be met with the same resources. However, higher resource expenditure is needed in the short and medium term in order to achieve the objectives, especially in the case of digital infrastructures and digital transformation requirements.

e. Risks

   Data protection requirements must be implemented and information security risks reduced to a bearable level.

2 Strategic thrusts and areas of action

The areas of action for the 2020-2023 Digitalisation Strategy were identified for each of the four following strategic thrusts:

- Thrust A: Information, data and process management
- Thrust B: Innovation and change management
- Thrust C: Client and service orientation
- Thrust D: Interactions between government processes and IT

The strategic thrusts are in line with the Digital Switzerland Strategy[2], the national strategy to protect Switzerland from cyber-risks[3] and the eGovernment Strategy Switzerland[4], as well as the FDF/CCG final report on the digital administration project[5].

2.1 Information, data and process management (thrust A)

Purpose and impact

In order to advance the objectives established in the blueprint for the digital transformation of the Federal Administration – service innovation, process innovation, client centricity and cost transparency – both information flows and processes must be reorganised. To this end, the corresponding skills in information and process management must first be acquired or expanded. Information technology features are developing in a way that supports digitalisation. However, the initiative must come from the process side.

Aims

Thrust A (information, data and process management) is intended to

- create organisational, legal and technical conditions enabling information/data to be used for digitalisation or automation;
- develop skills in the use of data science approaches;
- manage digitalisation processes.

Area of action A1: Establish information and data management system

The availability of information and its proper use in different formats, channels and vehicles become increasingly important in the digital context. The once-only principle is an important prerequisite for the design and automation of digital processes that involve various authorities. Clients expect consistent, high-quality information.

---

2 https://www.bakom.admin.ch/dam/bakom/de/dokumente/informationsgesellschaft/strategie/strategie_digitale_schweiz.pdf

3 https://www.ncsc.admin.ch/dam/ncsc/de/dokumente/strategie/Nationale_Strategie_Schutz_Schweiz_vor_Cyber-Risiken_NCS_2018-22_DE.pdf

4 https://www.egovernment.ch/index.php/download_file/1728/3332

5 https://www.newsd.admin.ch/newsd/message/attachments/58761.pdf (available in French, German, Italian)

Comprehensively coordinated information and data management creates the general conditions for greater security, productivity and efficiency, as well as better cooperation. User-friendliness is increased, synergies are exploited and the administrative burden is reduced.

- **Objective A1-1** Establish information and data management system

  Information and data management (strategy, governance, architecture and applications) at all levels should be based on the once-only principle.

  In the area of data and information protection, and especially comprehensive use of data within the context of end-to-end digitalisation, the legal basis should be reviewed and necessary changes made to improve security and cyber aspects.

Area of action A2:
Build expertise in data science management

Support for decision-making through data analysis is becoming more sophisticated and traditional data processing is reaching its limits as data volumes become larger, more heterogeneous and more complex. Data analytics are required to tap the information potential of data.

To complement the expertise of organisational units and departments, a data science competence network will be established within the Federal Administration. This network will develop data science management capacities in a systematic manner throughout the Confederation, advise users in organisational units and departments, show them how to use basic principles and methods and, in particular, provide resources to assist them in the early project phases. The competence network will work with authorities active in this area and encourage cooperation between training institutions, research centres and industry. In addition, a data science competence centre will be created within the FDHA (FSO) to provide services to the competence network.

- **Objective A2-1** Develop data science expertise and advisory services

  The Federal Administration should be in a position to assess the potential of intelligent analysis of very large volumes of heterogeneous data and to exploit this potential.

  The organisational units that already possess specific knowledge should share information and work with partners to build a data science competence network for the entire Federal Administration. Furthermore, the data science competence centre should provide corresponding services.

Area of action A3:
Design digital government services

In the digital context, gaining a clear understanding of the process landscape has become increasingly crucial, especially when designing processes that span various authorities and systems. Process management provides a sound foundation for successful process optimisation and digitalisation projects.

A demand-oriented, vertically networked process management system that is continually refined at all levels enables efficient and client-centric processes to be designed, existing processes to be continuously optimised and more effective plans to be laid for project implementation. In particular, a process management system

makes processes interoperable and links them to processes that span authorities and systems with end-to-end digitalisation in mind.

- **Objective A3-1** Establish and expand process management

  The discipline of process management should be established in a way that enables processes to be designed and optimised from a client perspective (end-to-end services). Organisational units should become the main driving force behind this.

- **Objective A3-2** Bundle the needs for digital basic services

  The needs for basic digital services that cannot be assigned directly to a single specialist task should be identified, especially within the context of digitalisation projects already under way within the Federal Administration.

  These needs should be bundled together as a basis for providing modular basic digital services or to ensure that suitable existing modules can be used as broadly as possible.

2.2 Innovation and change management (thrust B)

Purpose and impact

Thrust B takes the four innovation objectives (service innovation, process innovation, management and organisational innovation, and ICT innovation) from the blueprint for the digital transformation of the Federal Administration and seeks to further develop the corporate culture to achieve greater agility, exploration and improved transformation capacity. The reliability and correctness of government processes will be maintained.

Aims

Thrust B (innovation and change management) is intended to

- create a cultural, organisational and formal framework for digitalisation projects of an exploratory nature;
- make targeted use of the potential offered by agile methods;
- specifically test new technologies to assess their suitability for operations (e.g. in terms of effectiveness, efficiency and quality);
- empower senior managers who are well-versed in their day-to-day operations and help line managers address change and transformation issues as well;
- make procurements as innovation-friendly as possible within the legal framework.

Area of action B1: Create leeway and innovation incentives

By introducing technical innovations, digitalisation is a powerful driver of innovation. At the same time, digital transformation requires innovative forces within organisations. Leeway and appropriate incentives are needed to tap digitalisation potential and drive innovation.

Innovation management is often at odds with day-to-day operations. Consequently, leeway and innovation incentives have to be created at all levels. In addition to stimulus programmes (top-down) and decentralised idea management (bottom-up), exploration projects in particular need to be encouraged. It is also important to

ensure that these projects can be financed with minimal government involvement and that temporary organisations can be established quickly.

- **Objective B1-1** Expand leeway and create innovation incentives

  Suitable general conditions should be created for exploration projects, enabling new ideas, approaches and concepts to be tested and thus opportunities to be explored within a clearly defined framework.

  Within the bounds of what is legally permissible, exploration projects should be deliberately granted a degree of freedom that goes beyond the scope of existing processes, technologies, methods and guidelines. The focus here should be on gaining knowledge rather than on the typical objective of achieving successful outcomes.

  Similarly, the required general conditions should be established to ensure the security, sustainability and legality of technical and operational solutions if exploration results should be introduced in the productive environment or used beyond a pilot trial.

Area of action B2:
Use agile methods in an appropriate context

Due to its complexity and unknowns, digitalisation often requires a more agile approach, e.g. to quickly obtain initial results to test ideas or to create closer collaboration between operations and ICT. Agile methods enable a strong client focus, as well as interdisciplinary and cross-functional collaboration.

The potential offered by agile methods will be assessed, positioned and made usable for Federal Administration projects according to their context. This refers particularly to the delivery of results in short cycles, as well as to close interdisciplinary cooperation between various participants so as to achieve a high degree of acceptance of the proposed solutions.

- **Objective B2-1** Improve the general conditions for agile methods

  The general conditions should be suitable for working in an agile manner and, when using agile approaches, enable interactions with traditional work and management styles to be shaped in an optimal manner. Existing methodological specifications should be reviewed and adapted.

- **Objective B2-2** Extend the use of agile methods

  People should become familiar with and know how to use agile methods. Managers should be able to judge which methods are suitable for which type of project. A growing proportion of projects should be managed using agile methods.

  The organisational units and ICT service providers should be able to fill the relevant roles, and the corresponding people should be trained and qualified to do so.

Area of action B3:
Test and use new technologies

In order to be able to exploit the opportunities offered by new technologies, their potential must first be identified and the concrete application possibilities within the

Federal Administration should then be examined and tested. This should be done systematically and in a coordinated manner so that new opportunities are not missed and at the same time duplication of testing efforts is avoided.

The organisational units should identify application areas and issues, and they should initiate technology trials in the form of tests, prototypes and pilot projects, each of which must have a clear links to government processes (not fundamental research).

- **Objective B3-1** Establish systematic technology scouting

  A transversal technology scouting approach should be pursued at Federal Administration level, so that decentralised findings can be rapidly exchanged multilaterally and duplications avoided. The general conditions should be conducive to concentrated and coordinated technology testing

  Organisational forms for interdisciplinary cooperation at all levels should be established, and sharing of information among teachers, researchers and industry should be institutionalised.

Area of action B4:
Enhance managers' knowledge of process innovation

The digital transformation requires managers to be provided with the right skills set. Not all organisational units have the same level of experience and the necessary skills. This is partly explained by the fact that transformation processes a very different from the day-to-day tasks associated with most government processes.

Managers are in particular need of skills in the area of process innovation and organisational change management. They also need to understand the methods used to manage change processes. The ability to change refers to the ability of an organisation to continuously improve its structures, processes and services and to change these radically.

- **Objective B4-1** Enable the management of change processes

  Managers who have traditionally been well-versed in their daily processes and direct supervisory activities should become more able to handle change and transformation issues as well. They should be provided with the necessary knowledge and skills needed to successfully apply methods to manage change processes.

  The ability of organisations to change should be improved and the opportunities arising from digitalisation projects can be used effectively. Members of senior management at all levels and managers should be able to identify and exploit the potential for change made possible through digitalisation and tap into the potential benefits.

- **Objective B4-2** Encourage outcome-based continuing education and training

  Ideally, continuing education and training campaigns should be launched as part of specific digitalisation projects. Appropriate incentives for attending continuing education and training courses should be aimed primarily at ensuring that employees gain the specific digitalisation skills needed to achieve project objectives.

Area of action B5:
Make procurements innovation-friendly

In many areas, the Federal Administration outsources tasks to external providers. The procurement process should lay the foundations for future productive collaboration with external providers. However, the current procurement process is often perceived as a fastidious and stifling, which inhibits innovation and agility.

New forms of cooperation and an agile approach to digitalisation projects should be made possible and encouraged within the framework of current procurement law. To this end, the central procurement offices will design an adapted, innovation-friendly and accelerated procurement process that matches legal requirements.

- **Objective B5-1** Accelerate procurement procedures
  Greater latitude should be given to make procurement procedures as speedy and innovation-friendly as possible within legally permissible boundaries.
- **Objective B5-2** Identify room for manoeuvre and systematically use it
  The users in the organisational units should have a sound understanding of the procurement procedure and be able to use of existing latitude and room for manoeuvre.

2.3 Client and service orientation (thrust C)

Purpose and impact

Government services are based on the principle of legality and competence. This results in a division of work within the administration that may be contrary to the client perspective. Thrust C addresses this aspect and is designed to achieve service innovation and process innovation objectives.

Aims

Thrust C (client and service orientation) is intended to:

- anchor client orientation and thus thinking from the outside to the inside as the basis for digitalisation, rather than the contrary;
- harmonise digital interactions with cantons, communes, foreign/international organisations, associations and especially companies and private individuals across the entire Federal Administration;
- relieve IT organisations and users of issues relating to infrastructures and platforms, so that human and financial resources are freed up for the digitalisation of processes.

Area of action C1:
Embrace and exemplify client orientation

Federal Administration services and processes should be designed with the client in mind. Client orientation means focusing all reflections and actions on the requirements, needs and interests of the client, rather than on those of one's organisation.

Knowing your clients and their needs is a key prerequisite for creating benefits from the exploitation of the potential of digitalisation. In order to achieve a global orientation, a client segmentation system should be created for the entire Confederation, as well as a categorisation of client interactions.

Especially in the context of digitalisation projects, the implementation of a client focus can require new forms of internal cooperation in order to orchestrate various internal contributions in the interests of a positive client experience.

- **Objective C1-1** Develop client orientation

  Federal government services and processes should become client-oriented, and the end-to-end (once only) principles should be applied to the extent permitted by law. Necessary changes to legislation should be initiated.

  Thinking from the outside to the inside (rather than the contrary) as the basis for digitalisation should be adopted and assimilated by employees at all levels.

Area of action C2:
Provide man-to-machine portals and machine-to-machine interfaces

Digital public services can be provided via man-to-machine portals or machine-to-machine interfaces, depending on the type of service and intended users. In situations where there are many recurring transactions, machine-to-machine interfaces offer greater benefits to clients over man-to-machine portals.

The Confederation should maintain and manage a portfolio of shared man-to-machine portals and machine-to-machine interfaces on the basis of how well public services can be provided by each option. In order to gain an overview, a central catalogue should be prepared with information on the public services offered online, the corresponding user groups and associated responsibilities.

The organisational units should define which public services will be offered via man-to-machine portals or via machine-to-machine interfaces to which user groups. They should also formulate their requirements for man-to-machine portal and machine-to-machine interface services.

- **Objective C2-1** Provide man-to-machine portals and machine-to-machine interfaces

  Public services should be provided to users via man-to-machine portals and/or machine-to-machine electronic interfaces.

  Shared portals and interfaces should exist in order to provide services faster, more reasonably and with less risk.

Area of action C3:
Create a federal hybrid cloud

The departments, organisational units and ICT service providers should be able to rely on secure, cost-effective and rapidly available cloud services[6]. These should to be bundled and orchestrated in the Confederation's hybrid cloud. Internal and external infrastructure and platform services of mutual interest should be provided for this purpose, together with defined and automated interfaces.

The hybrid cloud strategy and architecture should be established at Federal Administration level, and the specifications, tools and operating organisations

[6] https://www.newsd.admin.ch/newsd/message/attachments/64425.pdf

required for strategy implementation should be made available. A strategic portfolio of infrastructure and platform services should also be created.

The users in organisational units and departments should plan their needs and formulate their requirements in qualitative and quantitative terms.

- **Objective C3-1** Create a hybrid cloud

  Secure, cost-effective and rapidly available cloud services should exist for orderly use; the legal framework should be clarified.

  The hybrid cloud architecture and procurement, as well as linking, management and operating processes should be prepared and coordinated in line with the users' requirements.

2.4 Interactions between government processes and information technology (thrust D)

Purpose and impact

Adopting combined process and IT focus is an indispensable prerequisite for the success of the digital transformation of the Federal Administration. Mutual coordination between government processes and IT systems is essential for this. Thrust D aims to establish a culture of dialogue and close cooperation between government process and IT partners at all levels.

Aims

Thrust D (process and IT interactions) is intended to

- improve coordination between processes and IT systems;
- have digitalisation and ICT 'ambassadors' in the departments and organisational units
- empower managers who are very familiar with their routine tasks and direct supervisors to deal increasingly with aspects of ICT use as well;
- ensure that digitalisation results in minimal redundancies throughout the Confederation, as well as minimal gaps in processes, applications and infrastructures.

Area of action D1:
Anchor digitalisation at the top management level

Interactions between government processes and IT can encouraged by anchoring digitalisation at the top management level. ICT managerial responsibility has to be brought closer to the process side in the context of digitalisation. With this in mind, the role of a CIO (Chief Information Officer), who is equally well-versed in the technical and process aspects, should be redefined.

At the level of the Federal Administration, the Federal Chancellery's Digital Transformation and ICT Linking Unit (DTI) ensures interdepartmental coordination of digitisation projects. It is also responsible for linking ICT throughout the entire Federal Administration. This area is headed by the Delegate for Digital Transformation and ICT Linking and acts as a staff unit of the Federal Council's Digitalisation and ICT Committee. An important role is also played by the Conference of Secretaries General (GSK), which assists the Federal Chancellery with interdepartmental coordination and the establishment of joint and viable solutions.

At departmental level, CIOs are responsible for managing and further developing digitalisation in the departments' management organisation and should be involved in related processes. The CIOs understand the process side and are responsible for the departmental digitalisation or IT strategy.

At organisational unit level, CIOs are responsible for managing and further developing digitalisation as members of senior management and should be involved in related processes, provided there is a need for such a role in an organisational unit because of its size or the importance of digitalisation.

- **Objective D1-1** Anchor digitalisation at top management level

  At all levels of the Federal Administration, the role of the Chief Information Officer should be redefined in relation to the digital transformation and should be anchored at top management level.

Area of action D2:
Ensure ICT is used effectively

Successful companies and organisations steer digitalisation and the use ICT in a process- and client-oriented manner by ensuring a lively (also informal) exchange on key issues between the IT and process side. Consequently, ICT linking should be integrated into processes, the artificial separation between processes and IT should be removed, and cooperation should be based on partnership dynamics.

Through process and ICT interactions, the process side receives needs-based solutions and recognises possibilities and opportunities for the digitalisation of its services.

At the Federal Administration level, a consultative body should be set up within the meaning of Article 5 of the Ordinance on the Coordination of the Digital Transformation and ICT (DTIO) to ensure the exchange of experiences across departments and facilitate coordination when defining the general conditions and requirements for federal management of the digital transformation and ICT. This body should be comprised of representatives of all departments, the Federal Chancellery and selected offices. It should approach implementation of the federal digitalisation strategy in an integrated manner. Its members should inform the organisational units and departments about digitalisation and ICT linking tasks, and likewise discuss their respective concerns within the consultative body.

At organisational unit and department level, the senior management or management organisations of the departments should perform ICT linking tasks.

Care must be taken to ensure that no new bodies are created, but rather that existing ones are used. This can be achieved by repositioning and adapting them as necessary.

- **Objective D2-1** Establish partnership to link the use of ICT with processes

  A culture of dialogue and close cooperation between those responsible for government processes and those responsible for IT should be fostered at all levels. Cooperation should be based on partnership dynamics.

  ICT use should be integrated into day-to-day processes. The process side should recognise the possibilities and opportunities of digitalisation, and should be provided with digitalisation solutions tailored to its needs.

Area of action D3:
Enhance the ICT skills of managers

In companies/organisations that have successfully implemented ICT, managers should know how to use ICT and be able to manage processes and projects. In the Federal Administration, not all organisational units have the relevant experience and necessary skills.

At organisational unit and department level, continuing education and training campaigns should be launched as part of their digitalisation projects. Appropriate continuing education and training incentives should be created, based primarily on the impact that the skills will have on specific digitalisation projects.

- **Objective D3-1** Enhance the ICT skills of managers

  Managers who have traditionally been well-versed in their daily processes and direct supervisory activities should become more able to handle aspects of ICT use as well. They should be provided with the necessary knowledge and skills needed to successfully use ICT and encourage close dialogue between processes and IT.

Area of action D4:
Establish planning disciplines

In order to establish planning disciplines that ensure optimal process and ICT interactions in the digital transformation, an enterprise architecture should be developed and used as a strategic planning instrument of the Federal Administration. Enterprise architecture management is the basis for successful digitalisation and should be anchored in processes at all levels.

A vertically networked enterprise architecture that is continually refined at all levels will create transparency not only for ICT, but especially for processes too in the digital transformation. It will thus form a key foundation for transformation processes and planning.

At organisational unit level, process models, target architectures and transition plans should be jointly developed and subsequently implemented at the appropriate level in the architectural context of processes and ICT. The methodological foundations for this should be developed at federal government level based on requirements, taking account of and incorporating existing capabilities and the intended use.

- **Objective D4-1** Establish planning disciplines

  Enterprise architecture management should be established as a strategic development tool, anchored in processes at all levels of the Federal Administration and vertically networked across organisational levels.

3 Principles for ICT use

The following principles for ICT use should guide the actions of all players.

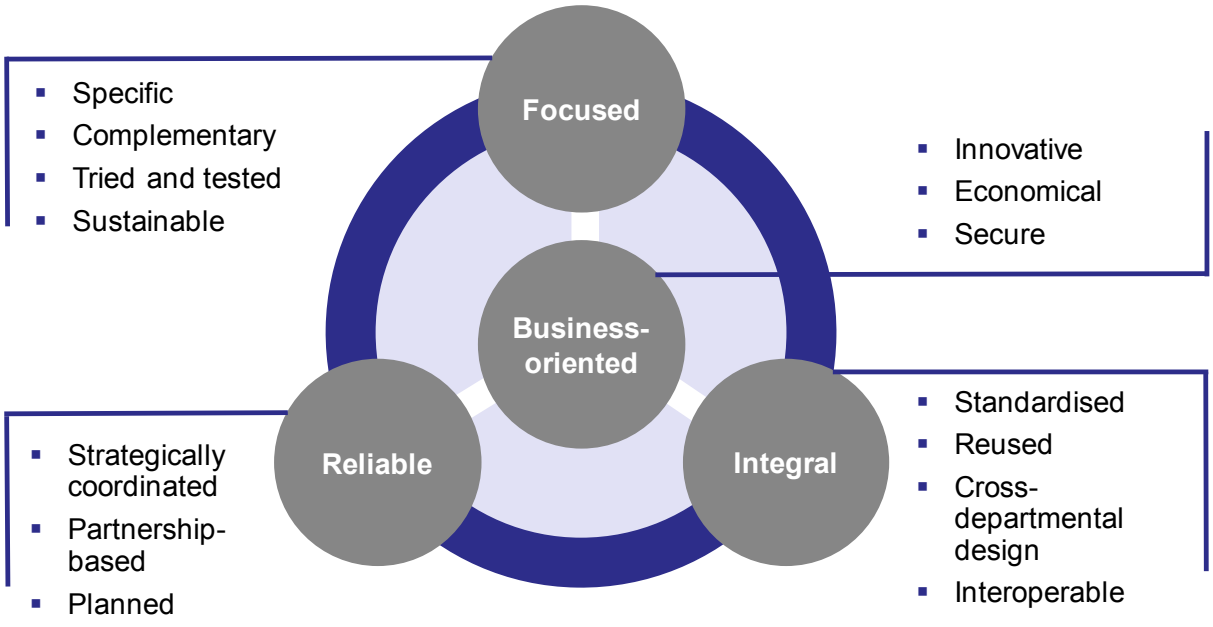

Figure 2: Principles applying to the IT structure and ICT services

Process-oriented

ICT services for the Federal Administration should be geared towards government objectives and achieve a significant impact and cost-effectiveness in supporting processes. They facilitate day-to-day work and offer risk-adjusted security.

- Innovative

  Service users and providers should jointly develop solutions to achieve the organisational units' objectives and support process innovation.
- Economical

  The cost-effectiveness of processes and ICT services should be maximised and their risks[7] minimised. Both should be planned, managed and controlled over the entire life cycle of ICT systems[8] from the process and technical perspective. Risks and cost-effectiveness from the perspective of external players such as cantons, communes, citizens and companies should be included.

---

7 See 'Instructions on the Confederation's risk policy' of 24 September 2010, https://www.admin.ch/opc/de/federal-gazette/2010/6549.pdf (available in French, German, Italian)

8 The ICT life cycle comprises the stages 'plan' – 'build' – 'use' (including decommissioning)

- Secure

  Data protection and information security, based on reliable risk analyses, should be appropriately[9] ensured[10] using technical and organisational measures. The organisational units and ICT service providers should take their responsibility for the necessary ICT security[11] seriously. The end-to-end processes and shared data use associated with digitalisation require greater security awareness, also to ensure trust.

Reliable

Service users and providers should be able to rely on one another. Service users should receive the agreed ICT services in line with requirements and, where a comparison is possible, at market conditions in terms of quality, time, costs and security.

- Strategically coordinated

  All digitalisation approaches based on federal digitalisation or IT strategies should adhere to these principles and help to advance implementation of the Confederation's overarching digitalisation strategy.
- Partnership-based

  The organisational units and service providers should work in partnership, promoting long-term and stable cooperation based on trust. They should comply with agreements, ensure traceability and give one another sufficient room for manoeuvre.
- Planned

  Organisational units should work with internal and external service providers to plan the medium- and long-term ICT service needs.

Integral

With a view to the big picture, standards, shared platforms and information models should link processes across all government levels and organisational units right through to partners in Switzerland and abroad.

- Standardised

  Service users and providers should pay attention to uniformity and compliance with standards. To this end, service providers should advise organisational units on proposed solutions.
- Reused

  Before a new solution is procured or developed, careful consideration should be given to determine whether continued use of existing solutions might be more

---

[9] 'Appropriately' means balancing security on the one hand and functionality, costs and operability on the other.

[10] See https://www.ncsc.admin.ch/ncsc/de/home/dokumentation/sicherheitsvorgaben-bund/grundlagen.html as well as "Federal Council directives on ICT security in the Federal Administration' of 16 January 2019, https://fedlex.data.admin.ch/eli/fga/2019/278 (available in French, German, Italian)

[11] Including business continuity management (BCM) in accordance with chapter 2, section 17 ('Securing operation') of the directive 'Basic ICT protection in the Federal Administration' https://www.ncsc.admin.ch/dam/ncsc/de/dokumente/dokumentation/vorgaben/sicherheit/si001/Si001-IKT-Grundschutz_V4-6-d.pdf.download.pdf/Si001-IKT-Grundschutz_V4-6-d.pdf (available in French, German, Italian)

cost effective. The use of available ICT solutions should take precedence over the provision of individual ICT solutions.

In cross-organisational processes, the same information may sometimes be needed by several organisational units. The multiple entry and maintenance of information should be avoided in accordance with the statutory requirements. Where no legal basis exists for the shared use of information, efforts are made to create such a basis.

- Cross-departmental design

  The Federal Administration's enterprise architecture should describe the interaction of processes with ICT solutions, as well as the interrelationships between processes and ICT levels. It should support cross-organisational cooperation, especially with a view to achieving interdepartmental synergies and using resources efficiently and effectively.

- Interoperable

  The use of open, product-neutral and freely available standards should encourage interoperability and aims to achieve independence from individual suppliers or products.

Focused

The Federal Administration's ICT services should be focused on the tasks and capabilities within the organisational units' legal framework, undesirable redundancies should be eliminated, and ICT services from partners and the private sector should be used.

- Specific

  Internal ICT service providers should focus their development services on higher-value and specific[12] services by focussing on sovereign tasks.

- Complementary

  Internal ICT service providers should offer complementary services that correspond to their core areas of expertise.

- Tried and tested

  The Federal Administration should use tried and tested ICT technologies for process-critical ICT services. New ICT technologies should be used where they generate greater process value.

- Sustainable

  The Federal Administration should call for ICT products or services that are cost-effective, environmentally friendly, respect health factors and that are produced in a socially responsible manner.

[12] 'Specific' means related to the processes and the fulfilment of federal government tasks.

Appendix A: Key principles in the Federal Administration's strategic management of ICT

A.1 Working assumptions for the digital transformation

The digitalisation strategy should be based on eight working assumptions (a. to h.). These should describe what is required for a successful digital transformation of the Federal Administration in terms of ICT linking throughout the Confederation.

a. Greater understanding of digitalisation and ICT issues and exceptional commitment on the part of management during the transformation phase
   ➔ Digitalisation/ICT must be familiar/natural aspects of their work for process managers – this also makes the Federal Administration a more attractive employer in this field
b. The involvement of employees at all levels
   ➔ Top-down change management and bottom-up ideas culture
c. A focus on action in contact with internal partners and external clients instead of concentration on internal structures and internal processes
   ➔ Outside-in and end-to-end orientation of thinking and actions
d. The promotion of process innovation
   ➔ As an additional means for perfect process execution
e. A new type and quality of cooperation between departments and interaction with the environment of the Federal Administration (cantons and communes, citizens, companies, associations and organisations)
   ➔ Digitalisation requires the division of labour and bundling of projects, as well as generally integrative action
f. Intensive process and ICT interactions across all levels
   ➔ Digitalisation must become a joint process and ICT undertaking through close cooperation in projects and operations, based on common views
g. An understanding of the role of ICT as a partner or part of processes
   ➔ ICT is a process component/partner and not an executing service provider and cost factor; over time, ICT creates an optimised platform and system landscape throughout the Confederation
h. Optimal positioning of ICT management at all levels (close to the process side)
   ➔ ICT management must be as close as possible to process management

These assumptions have been incorporated into the revamped federal digitalisation strategy. Within the framework of its implementation, i.e. in all activities relating to strategic initiatives, the assumptions will be continually reviewed in order to be able to make statements on the progress of the transformation towards the 'digital Federal Administration'.

A.2 Strategic initiatives – instrument for cross-departmental planning of strategy implementation

The digitalisation strategy is implemented through various activities in the form of programmes, projects or orders, which are bundled into strategic initiatives (SI), the key instrument for the cross-departmental planning of strategy implementation.

While the four thrusts A to D group the fifteen areas of action A1 to D4 according to thematic aspects, an implementation-oriented logic is pursued for bundling the areas of action into strategic initiatives. Areas of action can help to achieve several objectives.

The annual master plan describes specific measures that may be taken to implement areas of action as well as the objectives of each strategic thrust. In this way, steering the strategic development of the ICT architecture and the use of ICT within the Federal Administration will become more flexible, better coordinated and strengthened through continuous planning dialogue.

The relationship between strategic thrusts, strategic initiatives, areas of action and objectives is as follows:

- each of the strategic thrusts (A to D) is thematically divided into several areas of action (A1 to D4) (see chapter 2);
- orientation goals (A1-1 to D4-1) are established for each area of action (see chapter 2);
- areas of action are grouped into various strategic initiatives (SI-1 to SI-9) by taking an implementation-oriented approach (see 2020 version of master plan, chapter 3);
- the orientation goals allocated to individual areas of action are refined in the master plan as implementation objectives, which flesh out the orientation goals to be reached with the strategic initiatives (see 2020 version of master plan, chapter 3);
- fleshing things out further, the master plan refines the implementation objectives into milestones and deliverables (see 2020 version of master plan, chapter 4).

The 2020 master plan documents the initial portfolio for strategy implementation. It consists of nine strategic initiatives, which are described in detail in the master plan (Appendix B) and address the orientation goals of the areas of action mentioned with appropriate activities. The master plan establishes the implementation priorities for the entire four-year strategy period, but also contains concrete measures over a period of one to two years.

A lead organisation is designated to coordinate each strategic initiative and is tasked with planning and implementing the initiative. In accordance with the defined responsibility for strategic ICT linking, strategic initiative leadership will specifically include accountability for reaching assigned orientation goals, as well as responsibility for setting implementation objectives and implementing measures.

The competent lead organisation will be the main party responsible for planning the resources required for a strategic initiative and for involving and coordinating with other stakeholders.

A.3 Planning areas – breakdown of responsibilities for ICT planning and linking throughout the Confederation

Planning areas are a form of organisation in which coordination domains and clarifying interfaces are used to simplify the complex aspects of cooperation and coordination affecting information technology within the federal government. This makes it easier for the offices responsible for ICT planning to take action.

A.3.1 Centrally defined planning areas

The centrally defined planning areas of the federal digitalisation strategy are laid down by the Federal Council as a general condition for ICT linking throughout the Confederation.

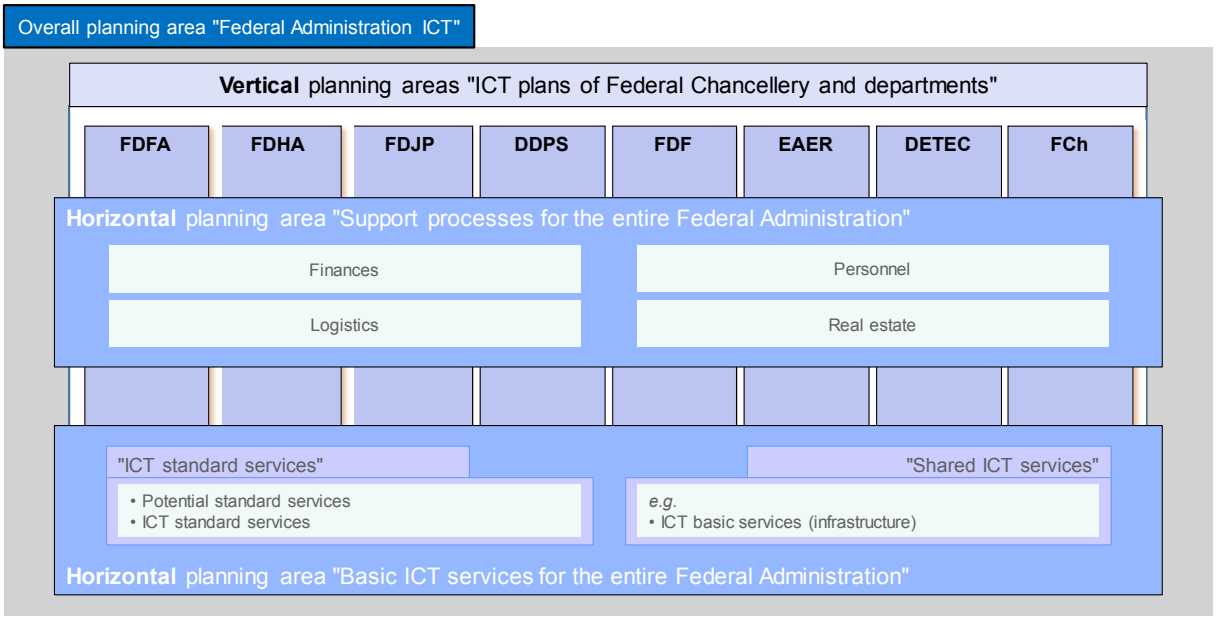

Figure 3: The centrally defined planning areas of the 2020-2023 digitalisation strategy (updated March 2020)

Overall planning area 'Digitalisation and ICT within the Federal Administration'

The contents to be defined in the overall planning area 'Digitalisation and ICT within the Federal Administration' include:

- specification areas and requirements across all departments within the Federal Administration;
- cross-departmental coordination to achieve the digital transformation;
- organisation of ICT linking and ICT management at overall Federal Administration level (incl. bodies for the entire Confederation);
- centrally managed ICT credits;
- centrally managed programmes and projects.

The Federal Chancellery's Digital Transformation and ICT Unit (DTI) is responsible for this overall planning area (see Figure 3). It establishes directives for the entire Confederation as part of this strategy (in accordance with Art. 17 para. 1 let. d DTIO).

Vertical planning areas of the Federal Chancellery and departments

In the planning areas of the Federal Chancellery and departments, the ICT usage requirements are consolidated and all the contents that are not planned at overall Federal Administration level and that are not delegated to the subordinate organisational units by departmental digitalisation or IT strategies are planned.

These include in particular:

- local specification areas and requirements (based on legal foundations or higher-level requirements, e.g. departmental architectures and standards);
- the department's own ICT organisation, including bodies;
- programmes or projects managed at departmental level.

Aside from the centrally defined planning areas, the departments may establish decentralised digitalisation or IT planning areas for the organisational units in their ICT strategies. The office level, as the main driver of the Federal Administration's task fulfilment, generally plans its own architecture and improve processes with ICT solutions.

The Federal Chancellery or the respective department is responsible for the vertical planning areas in terms of the performance of linking and management tasks (in accordance with Art. 3 and 8 DTIO).

Horizontal planning area 'support processes for the entire Federal Administration'

In the planning area 'support processes for the entire Federal Administration', ICT is planned and managed to bolster the following support processes: 'finance', 'personnel', 'logistics' and 'real estate'. 'IT' is an independent support process.[13]

Offices with the corresponding process tasks are responsible for the horizontal planning area 'support processes for the entire Federal Administration'. These offices are the Federal Finance Administration (FFA), the Federal Office of Personnel (FOPER) and the Federal Office for Buildings and Logistics (FOBL) in the civil administration area, and the Federal Office for Defence Procurement (armasuisse) in the military area.

Horizontal planning area 'basic digital/ICT services for the entire Federal Administration'

The following contents are planned and managed in the horizontal planning area 'basic digital/ICT services for the entire Federal Administration':

- in the sub-area 'ICT standard services', both (operational) ICT standard services and the candidates for ICT standard services;
- in the sub-area 'shared ICT services'[14] further basic ICT services which are designed within the framework of governance[15] for the entire Federal

---

[13] Shown as part of the federal digitalisation strategy in the overall planning area 'Digitalisation and ICT within the Federal Administration'

[14] In particular, this sub-sector includes ICT platform and ICT infrastructure services for shared use, i.e. cloud level infrastructure as a service (IaaS) and platform as a service (PaaS), as well as potentially other ICT services and functions for shared use, e.g. the software as a service (SaaS) level

[15] This may differ in individual aspects from the governance for standard services (centralised management by the Federal Chancellery's Digital Transformation and ICT Unit (DTI)

Administration.

The Federal Chancellery's Digital Transformation and ICT Unit (DTI) is responsible for the horizontal planning area 'basic ICT services for the entire Federal Administration'.

A.3.2 External planning areas

External planning areas will be formed for national strategies and/or political initiatives of the Confederation whose implementation is relevant for the Federal Administration's ICT.

External planning area 'digital Switzerland'

This external planning area is defined by the Digital Switzerland strategy, which under Article 15 on the Ordinance on the Coordination of the Digital Transformation and ICT (DTIO), contains the guidelines for the state's actions in the area of digital transformation.

External planning area 'eGovernment Switzerland'

This external planning field is laid out in Switzerland's eGovernment strategy. The office responsible for this, Digital Administration Switzerland (DVS), is administratively assigned to the Federal Department of Finance. Federal cooperation is regulated by a general public law agreement between the Confederation and the cantons.

The eGovernment planning area overlaps with all centrally defined planning areas, insofar as ICT use in task areas at Confederation level has to be coordinated with the subsequent levels of the cantons and communes. This coordination is carried out by the competent Federal Administration units in cooperation with the federal eGovernment coordination group.

External planning area 'protection against cyber-risks'

This external planning area is defined by the 2018-2022 national strategy for the protection of Switzerland against cyber risks (NCS). This strategy is issued by the Federal Council based on Article 5 of the Cyber Risks Ordinance (CyRO, SR 120.73). The National Cyber Security Centre in the Federal Department of Finance is responsible for this. It roughly outlines the tasks and responsibilities of the Federal Administration in the area of ICT resilience.

A.3.3 Specialised horizontal planning areas defined in a decentralised manner

Overarching responsibilities and cooperation areas in ICT planning are represented by horizontal planning areas. Centrally defined planning areas are referred to as being 'for the entire Federal Administration'. Other horizontal planning areas may also be defined in a decentralised manner.

Features of decentralised horizontal planning areas

Task-related specialised horizontal planning areas which can be defined in a decentralised manner by the departments are important. The units responsible for such planning areas steer and manage cooperation and coordination with other entities of the Federal Administration or other authorities in Switzerland.

Specific specialist communities can also be formed – based on ICT planning for individual task areas – in order to support cross-organisational cooperation within the Federal Administration and between the Confederation and the cantons.

Examples of specialised horizontal planning areas defined in a decentralised manner include ICT for geographical or statistical information, file management and archiving, and – in the eGovernment context – police or veterinary matters.[16]

The organisational units designated in the respective legal basis for corresponding tasks are responsible for decentralised specialised horizontal planning areas (not shown in Figure 3).

A.3.4 Planning levels and planning results

Digitalisation and ICT planning prepared in all centrally defined planning areas comprises the two levels of strategic and architecture planning. In the individual planning area, the medium- and long-term planning results of the strategic IT planning (SIP) and enterprise architecture planning (EAP) will be integrated into a rolling digitalisation/ICT plan.

To this end, the Federal Chancellery and the departments will align their respective digitalisation or IT strategy with the federal digitalisation strategy and draw up a master plan. At the level of enterprise architecture planning, development plans will be prepared in the individual planning areas in order to describe the strategic transition to the desired target states. The contents of these development plans will be coordinated among all planning areas of ICT linking throughout the Confederation, as well as with affected planning areas defined in a decentralised manner if necessary.

The master plan for the entire Federal Administration will describe the cross-departmental strategic initiatives. The developments from the enterprise architecture planning will flesh out the orientation goals and the areas of action so that the strategic initiatives reach the required level of implementation maturity.

Figure 4 shows the two levels and ICT planning outcomes achieved thus far [17].

---

[16] This list is for illustrative purposes only and is not exhaustive. The criteria for the creation of such planning areas must be assessed on a case-by-case basis in view of the specific characteristics of the respective speciality, including the subsidiary nature of task performance beyond the Swiss levels of government.

[17] Digital planning - strategic planning processes and instruments for digital products and digitalised services within the Federal Administration - will also be developed and implemented as part of the strategy.

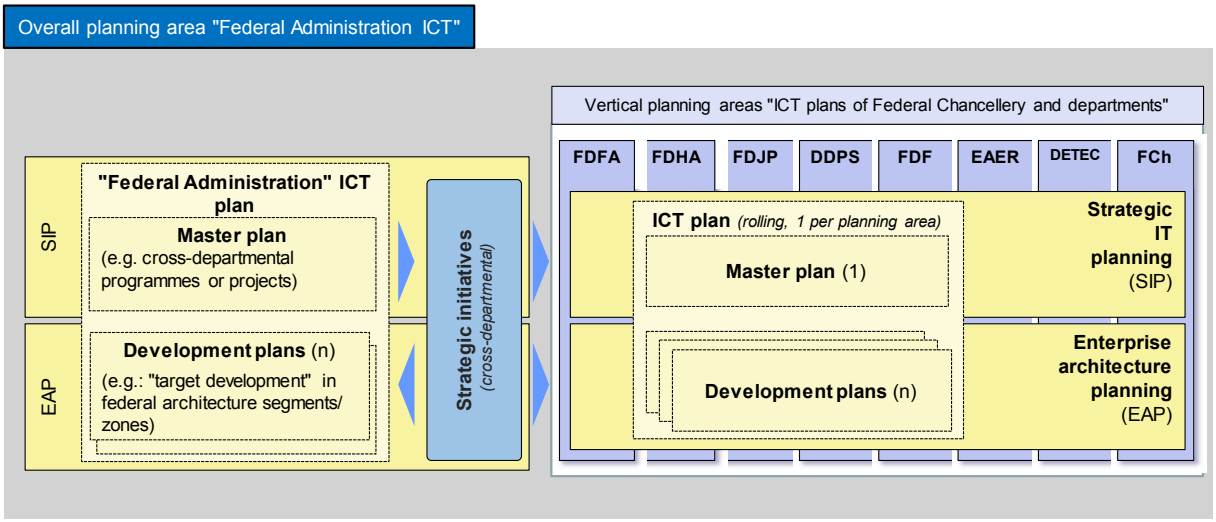

Figure 4: The main results (plans) of the strategy and architecture planning levels

Appendix B: Master plan

The master plan for the 'Confederation' level shows how the federal digitalisation strategy will be implemented. A stand-alone document, it is an integral part of the federal digitalisation strategy and is updated periodically.