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COMMUNICATION TO THE COMMISSION

**European Commission digital strategy
Next generation digital Commission**

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INTRODUCTION

The functioning of the European Union relies on a modern and digitally transformed Commission that rethinks policymaking, has a single digital government mindset, and optimises business and administrative processes. The Commission's digital transformation journey will support the delivery of the EU's strategic priorities based on European values and principles that set out a 'European way' for a Digital Decade¹: a human-centred approach, digital inclusion, digital sovereignty, trust, and ethical use of innovative technologies.

The COVID-19 pandemic has accelerated the digital transformation of our economy and society. Technology and digital services have been key to keeping the EU open for business, facilitating travel with the EU digital COVID-19 certificate and preparing the EU's recovery with NextGenerationEU².

The Commission's own digital transformation journey has also gained momentum. The 2018 European Commission digital strategy³ set the goal to create a digitally transformed, user-focused and data-driven organisation. Many IT-related action plans and initiatives have translated this goal into different steps. All of them are on track and will be implemented and monitored under the umbrella of this new strategy.

This digital transformation journey will now continue to accelerate with a broadened scope:

- from IT to digital transformation,
- from digital skills to digital culture, and
- from technology as a service provider to digitalisation and digital-ready policymaking.

This journey will be supported by strong IT security management and information security and cybersecurity rules that protect digital assets against increasing cyberthreats.

Achieving the mission of a public institution in a digital society requires more than an IT strategy to digitise and automate. It requires **an improvement in the institution's digital culture and business operations** by optimising its processes, streamlining and automating workflows, and using digital technologies to increase productivity.

The Commission's digital transformation calls for a **stronger corporate focus** that builds on a balanced governance and strong partnership between business departments and the central IT department.⁴

This corporate strategy provides a framework that includes the existing strategies for specific IT domains⁵. It has five strategic objectives:

¹ COM(2021) 118 final, 2030 Digital Compass: the European way for the Digital Decade and Declaration on European digital rights and principles: https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en#relatedlinks

² https://ec.europa.eu/info/strategy/recovery-plan-europe_en

³ C(2018) 7118 final, A digitally transformed, user-focused and data-driven Commission: https://ec.europa.eu/info/publications/EC-Digital-Strategy_en

⁴ Throughout this document "department" is used as a common term to refer to Commission directorates-general, offices and comparable entities. E.g. the "central IT department" is the Commission's Directorate-General for Informatics (DIGIT).

⁵ Corporate Information Security Strategy, European Commission Cloud Strategy, IT Security Strategy, Collaboration Solutions Strategy, Data@EC Strategy, Open source software strategy, European Interoperability Framework, Digital Workplace Strategy, User experience framework, and Towards a mobile enabled Commission.

- empower all staff and equip them with the necessary skills and encourage cross-functional teams and collaboration to **foster a digital culture** supported by a flexible and accessible digital workplace;
- embed appropriate digital checks in policymaking to **make EU policies digital-ready**;
- create incentives for a **business-driven digital transformation** in all Commission activities;
- track and foster innovation to efficiently manage the Commission's portfolio of IT systems (digital landscape) so it becomes an **inclusive, sustainable, streamlined and seamless digital environment**;
- deliver a **green, secure, and resilient infrastructure** as foundation for the Commission's business and flexible ways of working.

These objectives pave the way for the Commission to become a more agile, trusted and proactive administration supporting the delivery of EU's strategic priorities. Smooth interactions between **people, processes, data and technology** will shape the **next generation digital Commission** so that it leads by example.

1. PRINCIPLES DRIVING DIGITAL TRANSFORMATION OF THE COMMISSION

The Commission applies a set of overarching principles based on shared European values⁶, in line with the political declarations⁷ and policy proposals⁸, including the European digital rights and principles.

These guiding principles go beyond the more operational and narrowly IT-focused principles introduced in the 2018 European Commission Digital Strategy⁹.

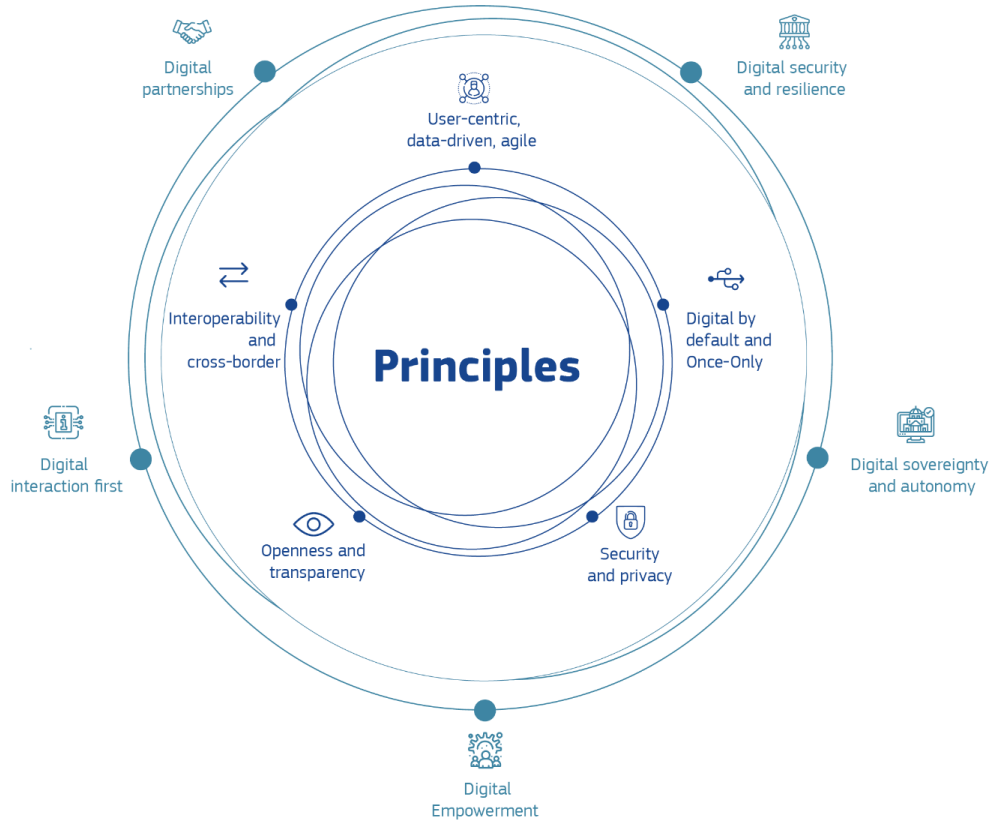


Figure 1: Digital transformation principles

Digital partnerships

A key step of digital transformation of the Commission is identifying cross-organisational needs and developing strong and trusted internal partnerships among departments (e.g. the

⁶ https://european-union.europa.eu/principles-countries-history/principles-and-values/aims-and-values_en

⁷ e.g. the Tallinn Ministerial Declaration on eGovernment (2017):

<https://digital-strategy.ec.europa.eu/en/news/ministerial-declaration-egovernment-tallinn-declaration>;

the Berlin Declaration on Digital Society and Value-Based Digital Government (2020), ministerial meeting of German Presidency of the Council of the European Union, 8 December 2020:

https://ec.europa.eu/isa2/sites/isa2/files/cdr_20201207_eu2020_berlin_declaration_on_digital_society_and_value-based_digital_government.pdf;

the Lisbon Declaration on Digital Democracy with a Purpose (2021): <https://www.lisbondeclaration.eu/>

⁸ COM(2021) 118 final, 2030 Digital Compass: the European way for the Digital Decade and Declaration on European digital rights and principles: https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en#relatedlinks

⁹ When a new IT investment is proposed, the governance process checks if it complies with the European Commission's digital strategy (ECDS) principles: digital by default and once-only, security and privacy, openness and transparency, interoperability and cross-border, and user-centric, data-driven and agile (Figure 1, inner ring).

Digital Solutions Modernisation Plan). This eliminates duplication, optimises resources and creates synergies across the institution.

In the second step, the Commission needs to maintain strong relationships with other EU institutions, bodies and agencies, Member States, international organisations, academia, social partners and the private sector to share resources and stay abreast of the latest technological trends.

Digital interaction first

In line with the Digital Compass¹⁰ objectives, digital channels are the Commission's preferred way to communicate internally and externally. Like other public administrations, the Commission aims to offer a seamless and user-centric experience through accessible digital solutions¹¹, which responds quickly to individuals and businesses.

Digital empowerment

Digital transformation is an organisation-wide endeavour: it requires awareness and facilitation at corporate level, while local leadership in the Commission's departments is needed to carry it out. All departments are empowered, and will be supported by the central IT department (e.g. via advisory services and related tools), to move forward with their own business-driven digital transformation in line with this digital strategy and corporate IT governance decisions.

Governance mechanisms provide the Commission's departments with the guidance and support to further innovate, modernise and continuously improve their processes and business solutions within a clearly defined corporate framework.

Digital sovereignty and autonomy

Europe's digital sovereignty requires digital infrastructures, products and services, which preserve Europe's security, strategic assets and interests in line with European values and requirements¹². Applying this principle in the present context means choosing technical alternatives that positively affect the Commission's ability to continue its work in a cost-effective, sustainable, independent and secure way. In specific areas, the Commission has already expressed its preference based on such an assessment, e.g. using open source solutions¹³ and open standards for exchanging information. In other areas, this will require an ad hoc assessment, taking the relevant legal framework into account (e.g. data protection and public procurement).

Digital security and resilience

¹⁰ COM/2021/118 final, Digital Compass: the European way for the Digital Decade: https://ec.europa.eu/info/sites/default/files/communication-digital-compass-2030_en.pdf, p. 12, goal 3.4.

¹¹ In accordance with the EU Strategy for the Rights of Persons with Disabilities 2021-2030: <https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8376&furtherPubs=yes>

¹² 'Rethinking strategic autonomy in the Digital Age', *EPSC Strategic Note* Issue 30, July 2019: <https://op.europa.eu/en/publication-detail/-/publication/889dd7b7-0cde-11ea-8c1f-01aa75ed71a1/language-en> and the Berlin Declaration on Digital Society and Value-Based Digital Government (2020): https://ec.europa.eu/isa2/sites/isa/files/cdr_20201207_eu2020_berlin_declaration_on_digital_society_and_value-based_digital_government.pdf

¹³ C(2020) 7149 final, Open source software strategy 2020-2023: https://ec.europa.eu/info/departments/informatics/open-source-software-strategy_en

Given the increase of more sophisticated cyberattacks and the shift to flexible working patterns, the Commission will move towards integrating a ‘zero trust’ architecture¹⁴, security by design, stronger cybersecurity checks and better security services, including for its sensitive and classified activities¹⁵. An integrated security approach and a strengthened cybersecurity culture and awareness programme will ensure appropriate resilience and protection of the Commission’s digital landscape.

¹⁴ Zero Trust Architecture means a security model, a set of system design principles, and a coordinated cybersecurity and system management strategy based on an acknowledgement that threats exist both inside and outside traditional network boundaries. It is included in COM(2022) 122 final, Proposal for a Regulation of the European Parliament and of the Council laying down measures for a high common level of cybersecurity at the institutions, bodies, offices and agencies of the Union: https://ec.europa.eu/info/publications/proposal-cybersecurity-regulation_en

¹⁵ Such as the Security Union strategy, defence funding or Foreign Direct Investment screening.

2. STRATEGIC OBJECTIVES

In order to advance in its digital transformation journey, the Commission will pursue five strategic objectives, which address current corporate needs¹⁶ and prepare for future challenges.

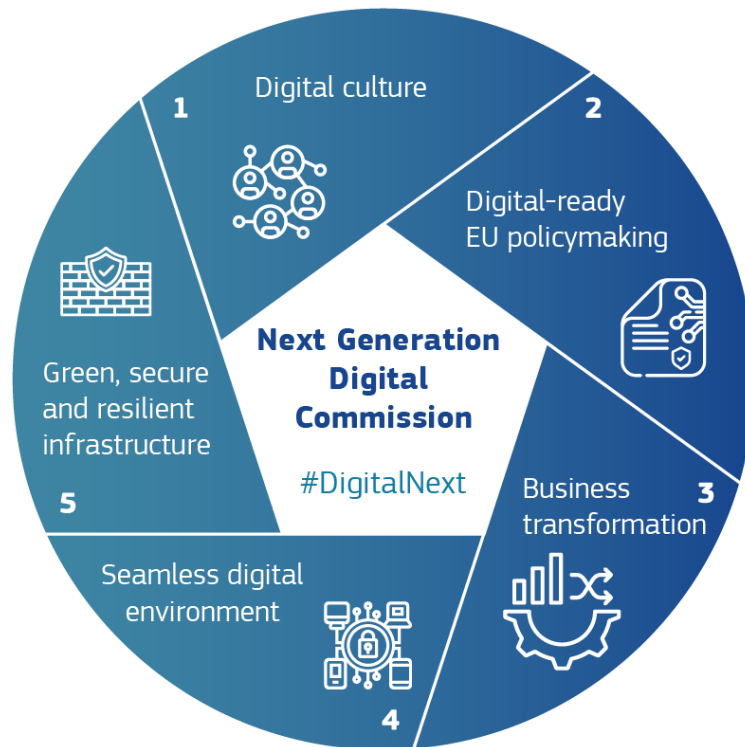


Figure 2: Strategic objectives

2.1. Foster a digital culture

Digital skills are a key factor in any digital transformation process. Using digital technologies in the Commission's daily work requires staff to be open to experiment and work with new technologies and tools, and to embrace new ways of working. The Commission has already put in place comprehensive digital training and cyber awareness programmes¹⁷. It has also made collaborative tools available in line with the digital workplace programme¹⁸, ensuring business continuity during the COVID-19 crisis.

Going beyond **digital skills** means helping staff identify ways in which digitalisation can improve their autonomy, agility and productivity and the impact of their work. This is a long-term process involving change management, awareness raising and a collaborative approach between the IT community and the entire Commission.

A strong digital culture, supported by strong digital leadership, will integrate 'data-powered insights in decision-making, drive customer-centricity and innovation while fostering collaboration across the organisation'¹⁹.

¹⁶ Corporate needs were identified from consultations within the Commission and discussed at the IT and Cybersecurity Board.

¹⁷ The cyber aware programme educates staff about risks and good practices, which anyone can use to help protect the Commission from cybersecurity threats.

¹⁸ <https://ec.europa.eu/info/sites/default/files/digitalworkplacestrategy2017.pdf>

¹⁹ 'Digital culture – the driving force of digital transformation', World Economic Forum, 2021: <https://www.weforum.org/reports/digital-culture-the-driving-force-of-digital-transformation>

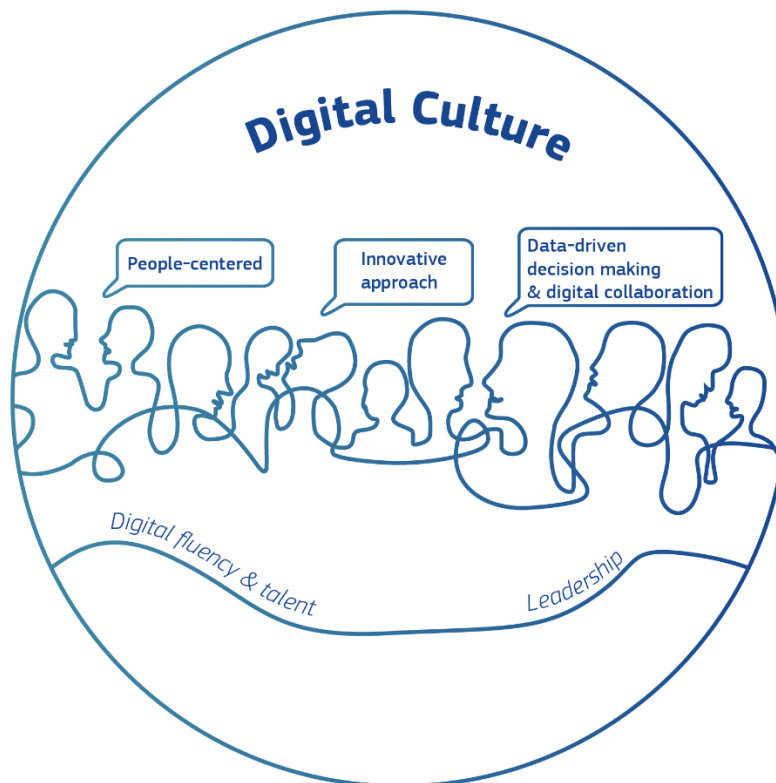


Figure 3: Digital culture elements

Life-long learning (upskilling and reskilling) and flexible structures will create a modern and digital workforce. This requires digital skills learning packages per job profile and regular checks on staff's digital skills. This is a shift that goes beyond digital literacy and using IT tools. It is about enabling non-IT staff to take advantage of digital technologies to perform their daily work better and more efficiently.

Cybersecurity and information security training will become mandatory for all newcomers. All Commission staff and external service providers with access to Commission IT equipment will have to follow a cyber awareness training every three years. This approach will be accompanied by improved tools that make exchanging information secure.

Developing a digital workforce will also need corporate branding, promoting a community-based approach, and more awareness of digital transformation opportunities. Therefore, the Commission will launch dedicated campaigns and initiatives²⁰, engage with existing communities²¹ and promote digital collaborative solutions across teams.

A medium-term plan will map digital job profiles, offer specific career guidance for staff concerned and encourage organisational change. This will help the Commission attract, recruit and retain people with digital talent and expertise in different areas of digital transformation (such as governance, infrastructure, data, artificial intelligence and IT security). Enhanced recruitment procedures will also help to attract these sought-after profiles in a very competitive job market.

²⁰ Such as job shadowing and structured exchanges between business and IT profiles.

²¹ For example, the Microsoft 365 Champions Community, the EU policymaking hub and the digital ambassador programme designed to bring digital matters closer to policymakers.

A successful digital transformation starts from the top, with senior management setting an example with a digital-first mindset. The Commission will promote **digital leadership**²² and change management in different seminars. The European School of Administration is committed to supporting digital leadership²³ development, addressing both mindsets and practical skills.

For a digital culture to flourish, the Commission needs room to innovate and experiment. The **Commission’s ICT Innovation framework**²⁴ through the Innovation Lab, in collaboration with other departments²⁵ and taking into account EU Member States innovative practices, empowers staff to test emerging technologies; create inclusive IT solutions in new ways (e.g. low code/no code²⁶); focus on user experience and accessibility; exploit data, information and knowledge; and solve common challenges together.

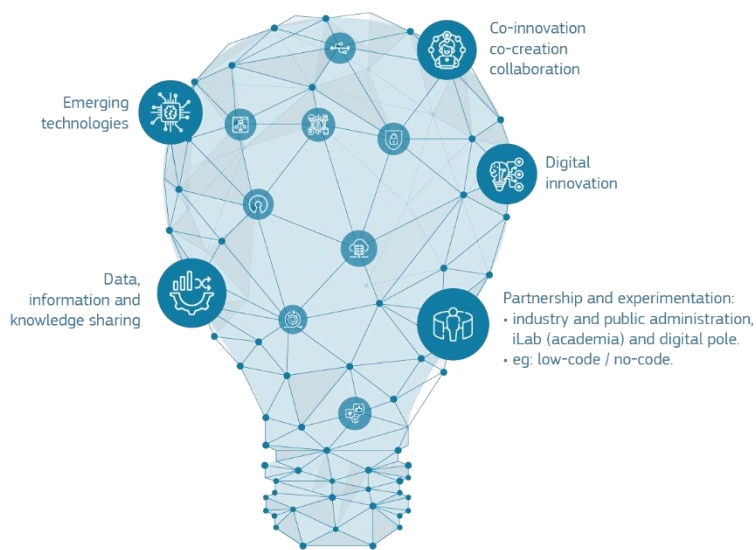


Figure 4: Commission ICT Innovation framework

2.2. Enable digital-ready EU policymaking

Digitalisation helps the Commission respond quickly, appropriately and accurately to EU societal needs. Digital is a core feature in EU policies. According to a recent report, ‘of the

²² One example is the Digital Leaders Circle. DG Informatics and DG Human Resources and Security, in collaboration with the European School of Administration (EUSA), sponsored a coaching cycle for senior managers to tackle digital transformation in EU institutions.

²³ ‘Navigating our Digital Reality – What Managers Need to Know’ – a EUSA programme – is open to managers at all levels across EU institutions and available in different learning formats.

²⁴ The ICT innovation framework will provide methods, enablers and support to nurture an innovation culture in the ICT domain.

²⁵ For example, the EU policy lab. For more information and a list of ongoing and completed projects, see: <https://blogs.ec.europa.eu/eupolicylab/portfolio/>; the competence centres on modelling, foresight, composite indicators and scoreboards at: https://knowledge4policy.ec.europa.eu/composite-indicators_en

²⁶ Low code/no code provides standard building blocks that can be used by business departments to quickly build cost effective digital solutions with a drag-and-drop approach.

284 legislative initiatives presented between March 2020 and June 2021, 47% referred to digital and 67% to data in their roadmap or at the inception impact assessment stage²⁷.

In an era of hyperconnectivity, where policy objectives, data sets and digital solutions are closely connected, EU policymaking can only be effective and efficient if it is supported by a digital partnership between policy and IT.

Digital solutions can be an important element in the context of the Commission regulatory fitness and performance programme²⁸ (REFIT) as means to reducing administrative burdens for citizens, businesses and public authorities and increasing efficiency and transparency in policy making.

The Commission’s **Better Regulation**²⁹ agenda integrates digital thinking in the policy cycle, promoting principles such as ‘digital by default’. Digital aspects are considered in all stages: policy design, impact assessments, stakeholder consultations, policy implementation, and monitoring and evaluation.

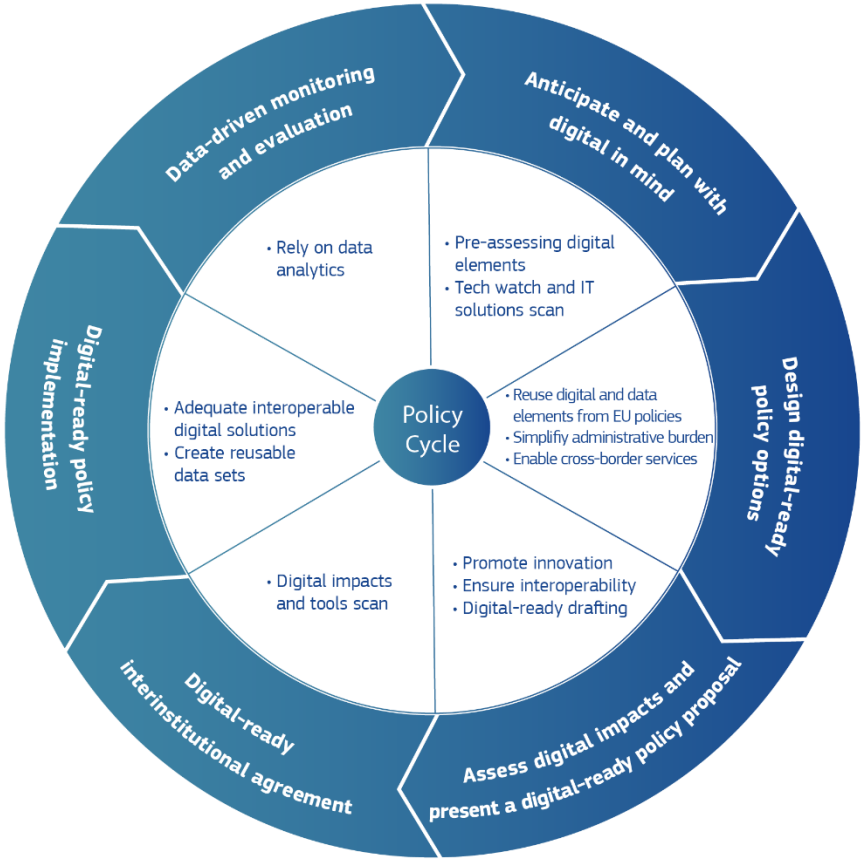


Figure 5: Policy cycle – digital-ready policymaking

Digital-ready policymaking – Tool 28 in the **Better Regulation Toolbox** – provides guidelines to build digital-ready policies and ‘digital check’ questions for policymakers. The aim is to help policymakers detect digital dimensions early on. This has the potential to

²⁷ Digital-ready policymaking boosted by COVID-19, Oct. 2021: <https://joinup.ec.europa.eu/collection/better-legislation-smoother-implementation/news/digital-ready-policymaking-boosted-covid-19>
²⁸ https://ec.europa.eu/info/law/law-making-process/evaluating-and-improving-existing-laws/refit-making-eu-law-simpler-less-costly-and-future-proof_en
²⁹ COM(2021) 2019 Better Regulation: Joining forces to make better laws: https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en

simplify implementation, improve resource efficiency, reduce administrative burdens, reuse existing standards and solutions, prepare the ground for using data analytics and encourage the uptake of innovative technologies. However, to be successful, it needs to be accompanied with advice at an early stage (e.g. on system architecture or cybersecurity), and, where possible, tap into the expertise of Member States' digital transformation and implementing bodies (e.g. those represented in the Expert Group on Interoperability of European Public Services³⁰).

To successfully integrate the digital dimension in policy making, it is important to:

- work in inter-disciplinary teams to reconcile different views, priorities and perspectives, including the appropriate technical expertise;
- consider the components of digital-ready policy making, such as user-centric approach, automation-ready, alignment with digital policies, evolving digital landscape, innovative and digital technologies, once-only principle, data management matters, data reuse and digital-ready drafting, among others;
- assess digital-ready impacts, based on a set of digital-ready questions and stakeholder input.

To support this in practice, an **advice mechanism³¹ for digital-ready policy making** will be set up to guide the lead service in charge of a new policy initiative through mandatory digital checks.

When preparing legislation, there will be a stronger focus on interoperability, usage of common standards in the legislative domain and smart digital tools for drafting and collaboration. This will make it possible for the Commission, other EU institutions and Member States to structure data access and exchange³² and to collect and monitor good practices. It will also prevent the development of overlapping systems, over-dependence on individual vendors and unsustainable practices.

The Expert Group on Interoperability of European Public Services is ready to advise on EU policies that have a big impact on Member States' digital infrastructure. An upcoming legislative proposal on interoperability³³ will provide the basis for structured cooperation among national public administrations on shared digital challenges. It will enable timely implementation of EU policies and the delivery of interoperable Union digital public service infrastructures.

Digital-ready EU policymaking will also support the emergence of further **European interoperable digital services** that increase cross-border cooperation and trust, as demonstrated by the EU digital COVID-19 certificate³⁴, secure digital identity³⁵ and a growing number of cross-border services made possible by the Single Digital Gateway³⁶.

³⁰ Additional information on the expert group: <https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3714>

³¹ This advice mechanism will be linked to existing mandated roles and services, such as the Better Regulation teams, the Regulatory Scrutiny Board and corporate IT governance. This mechanism will build synergies with existing initiatives and communities such as the EU policymaking hub, the Data Advisory Service, the digital innovation labs, the Innovative Public Services Observatory, the European Interoperability Framework Observatory, the Regulatory Reporting Community and the Fit for Future platform..

³² Such as through the use of data spaces (<https://digital-strategy.ec.europa.eu/en/library/staff-working-document-data-spaces>)

³³ Additional information: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12579-Interoperable-digital-public-services-European-Interoperability-Framework-evaluation-&-strategy_en

³⁴ Regulation (EU) 2021/953 on a framework for the issuance, verification and acceptance of interoperable COVID-19 vaccination, test and recovery certificates (EU Digital COVID Certificate) to facilitate free

2.3. Empower business-driven digital transformation

Digital transformation means rethinking and redesigning business processes using technology to improve resource efficiency and performance.

Where possible, **mapping, streamlining, optimising** and **automating business processes** will create synergies, increase transparency, simplify the adaptation and reusability of IT solutions for new needs and ultimately improve efficiency and predictability of business operations.

Commission departments will define their digital transformation journey by enriching their already established plans on annual IT activities with a roadmap that builds on a systematic review of the department's portfolio of digital systems and services, as well as its business needs and technical considerations. The **digital transformation roadmap** will also include concrete actions in the areas of digital culture and business transformation.

The Commission's corporate approach to digital transformation will be driven by the departments' business needs and priorities (e.g. determined by legislation, policy and specific operations) and corporate considerations (e.g. synergies within the digital and data landscape, promotion of corporate solutions, building blocks³⁷ and common standards). This approach relies on a close partnership between the Commission's departments and the central IT department, through a centrally acting digital transformation support service, that provides guidance and advice.

Support measures for driving this digital transformation will be put in place through community building, through different support services, such as the Dual Pillar Approach advisory, and by launching awards for modernisation good practices.

Using **innovative technologies** – such as artificial intelligence (AI)³⁸, advanced data analytics, language technologies and distributed ledger technology (blockchain) – can unlock significant benefits. These benefits include gathering, analysing and sharing information faster and more precisely, as well as automating more processes. A Commission AI action plan will pave the way for corporate AI solutions, built on pilots and proofs of concept, and inspired by the principles of the proposed Artificial Intelligence Act³⁹.

To use data for better decision-making, it is essential to have a suitable data ecosystem based on sound data management and policies.

The Commission's **Data@Strategy** and the Commission's **data platform** will continue to support the natural development of such a data ecosystem. They will provide a mapping of data assets (data catalogue), a (virtual) federation of local data instances, common solutions

movement during the COVID-19 pandemic: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0953>

³⁵ The Commission is currently evaluating this regulatory framework (<https://digital-strategy.ec.europa.eu/en/policies/eidas-regulation>)

³⁶ Regulation (EU) 2018/1724 establishing a single digital gateway to provide access to information, to procedures and to assistance and problem-solving services: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.295.01.0001.01.ENG&toc=OJ:L:2018:295:TOC

³⁷ Building blocks offer basic capabilities that can be used in any European project to facilitate the delivery of digital public services across borders. Additional information: <https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/CEF+Digital+Home>

³⁸ COM(2018)237 Artificial Intelligence for Europe and accompanying SWD(2018) 137 final: [https://ec.europa.eu/transparency/documents-register/detail?ref=COM\(2018\)237&lang=en](https://ec.europa.eu/transparency/documents-register/detail?ref=COM(2018)237&lang=en)

³⁹ In line with COM(2021) 205 – Fostering a European approach to Artificial Intelligence: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM:2021:205:FIN> and COM(2021) 206 Artificial Intelligence Act proposal: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0206>.

and products for data analytics and support the development and use of integrated and interoperable data sets.

Using common tools and services is crucial for experimenting and continuous improvement. Examples of these include master and reference data management tools and services, business intelligence solutions, virtual assistants, text mining tools, advanced analytics, language technologies and robotic process automation.

The **European strategy for data**⁴⁰ and **internal data governance and data policies**⁴¹ enable data management, curation and reusability; and ensure trust in data-sharing mechanisms. They promote the ‘sharing by default’ principle, in line with legal provisions, across the Commission, with business, local IT units and the central IT department sharing responsibilities.

2.4. Ensure a seamless digital landscape

The Commission needs an effective, efficient and secure digital landscape. Today, it has a very complex environment of IT systems, digital solutions and datasets. Moving towards a future-proof digital landscape needs a **reinforced corporate architecture**⁴² practice. This requires full commitment to the **dual pillar approach**⁴³ (first reuse, then buy, then build model) when taking decisions on new digital solutions.

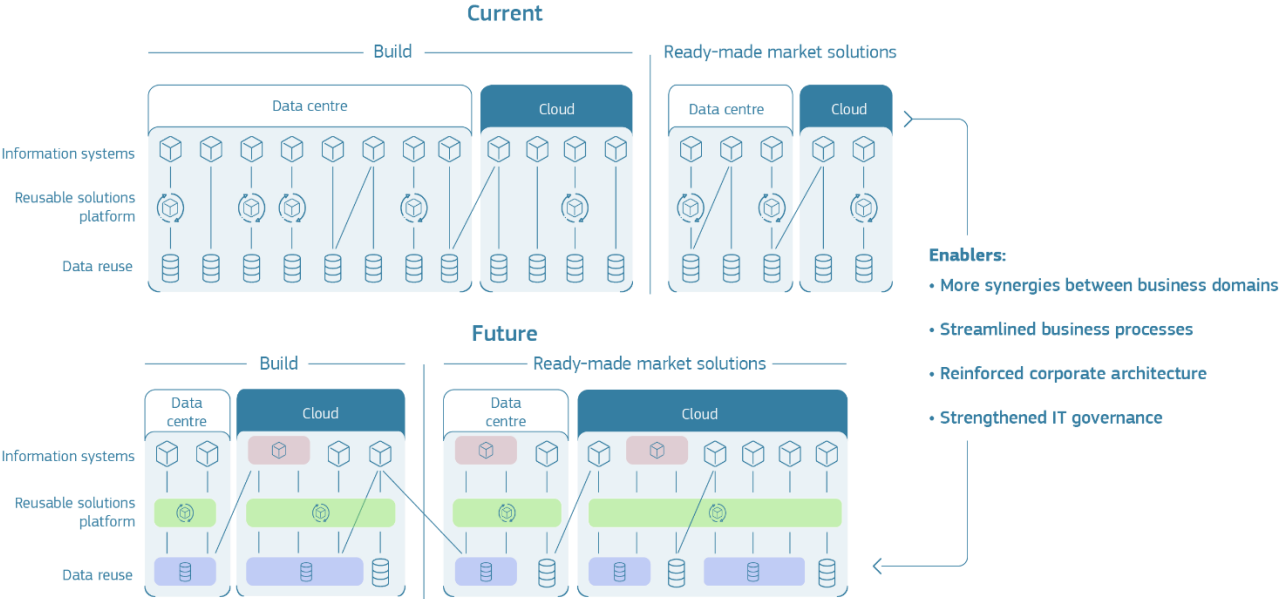


Figure 6: Evolution of the IT landscape

Steady progress on this journey will build on the following:

⁴⁰ <https://digital-strategy.ec.europa.eu/en/policies/strategy-data>

⁴¹ https://ec.europa.eu/info/sites/default/files/summary-data-governance-data-policies_en.pdf

⁴² An effective Corporate Architecture ensures consistency between strategic goals and operational guidance, e.g. when providing advice or reviewing and agreeing investments as part of the IT governance.

⁴³ For digital solutions, the dual pillar approach is about reusing existing solutions, including corporate building blocks, before considering ready-made market solutions. Customised development is the last option.

- **more use of open source software**⁴⁴. This will simplify reusing solutions, co-creating and sharing results across departments and with other European public administrations;
- **an integrated IT delivery model** supported by the DevSecOps programme⁴⁵. This will create a stronger link between IT and business, enabling faster experimentation, prototyping and deployment of digital solutions;
- **a cloud-first approach**⁴⁶ **with a progressive uptake** under the guidance of the Cloud Council⁴⁷;
- **an interoperability by design approach**, following the European Interoperability Framework⁴⁸ and systematic interoperability assessments for digital solutions;
- a systematic **vulnerability scanning** for digital solutions, **security by design** early in the software development lifecycle, and **security checks** for purchased software;
- a set of **cross-department modernisation and innovation pilots**, supported by the Digital Solutions Modernisation Plan (DSMP) community and nourished by the departmental digital transformation roadmaps, to foster collaboration and consolidate methodologies, processes, resources, and promote the reuse of IT solutions;
- an **early involvement of end users** in the design of IT systems to ensure a positive user-experience; and
- an **integrated data ecosystem** fostering data reusability, management and quality, and allowing for cross-border and cross-service data flows.

2.5. Sustain a green, secure and resilient infrastructure

The Commission is committed to making IT greener and more sustainable. It will use digital tools and solutions as well as energy-efficient digital infrastructure and technology to support the organisation becoming climate-neutral. The Commission has the responsibility to lead by example so that EU public administrations and digital organisations contribute to the Paris Agreement⁴⁹ and subsequent climate pacts⁵⁰. The Commission will optimise IT services and systems to minimise its environmental footprint. Green public procurement of IT equipment⁵¹

⁴⁴ Open-source balances immediate technological needs and future flexibility, increases IT security through multiple independent quality controls, and takes into account technological sovereignty, openness and long-term collective digital interests.

⁴⁵ DevSecOps removes traditional silos between the development of digital solutions, security aspects and operations. It promotes automation with readily available cloud services for running the application lifecycle and facilitates the adoption of agile development methodologies for IT projects.

⁴⁶ Cloud technologies have proven to reduce time to market and maintenance costs at the Commission while keeping a high level of control. Any new development and reassessment of existing information systems for transformation, rewriting or replacement should be cloud-native while complying with information security rules and the Commission's outsourcing principles.

⁴⁷ The Cloud Council promotes cloud adoption and oversees cloud issues ensuring alignment with business needs through appropriate cross-functional collaboration.

⁴⁸ COM(2017)134 see <https://eurlex.europa.eu/legalcontent/EN/TXT/HTML/?uri=CELEX:52017DC0134&from=EN>, see also <https://joinup.ec.europa.eu/collection/nifo-national-interoperability-framework-observatory/glossary/term/interoperability-design>

⁴⁹ Paris Agreement, United Nations, 2015: https://unfccc.int/sites/default/files/english_paris_agreement.pdf

⁵⁰ <https://unfccc.int/process-and-meetings#:a0659cbd-3b30-4c05-a4f9-268f16e5dd6b>

⁵¹ IT equipment refers to computers, monitors, tablets, smartphones: <https://ec.europa.eu/environment/gpp/pdf/toolkit/computers%20and%20monitors/ENV-2021-00071-00-00-EN-TRA-00.pdf> and data centres, server rooms and cloud services: [https://ec.europa.eu/environment/gpp/pdf/20032020_EU_GPP_criteria_for_data_centres_server_rooms_and%20cloud_services_SWD_\(2020\)_55_final.pdf](https://ec.europa.eu/environment/gpp/pdf/20032020_EU_GPP_criteria_for_data_centres_server_rooms_and%20cloud_services_SWD_(2020)_55_final.pdf)

with a reduced environmental impact and proper disposal of IT waste pave the way for this structural change to reach the Commission's greening goals⁵².

A secure, resilient and reliable IT infrastructure is the backbone of a digitally mature organisation and crucial to ensure its operations and business continuity. A cloud-first infrastructure affects digital solutions, the data ecosystem, the digital workplace, and services supporting IT infrastructure and IT security. The Digital Workplace Programme, allowing staff to work anytime and anywhere, has been a key enabler for the Commission's new human resources strategy and real estate policies. Providing a secure and resilient infrastructure and digital environment has ensured business continuity and made flexible ways of working possible.

Staff working in the Commission's constantly changing digital environment require a seamless user experience and wide-ranging possibilities for online collaboration, supported by secure digital services and tools given the increasing frequency of cyberattacks. Meeting these needs is critical and means providing faster access to the Commission's IT network and protecting the working environment through enhanced security features. The Commission is setting the interinstitutional standard for smooth communication and collaboration and a secure digital workplace.

Sustaining a secure and resilient infrastructure that meets the needs of Commission departments requires:

- **Secure access and use of the main IT applications on mobile devices by staff**, to facilitate flexible working. Introducing a new and more secure environment (the Welcome domain) will provide better Microsoft 365 collaboration features and better performance of IT tools. This environment is supported by a more secure, reliable and high-performance corporate network and telecommunication infrastructure. It will ensure faster connections and cater for the increasing volume of data.
- **Fit for purpose devices** (in line with the IT equipment allocation policy) and **office automation tools**, to enable secure collaboration, optimise work practices and improve productivity. To respond promptly to staff needs, a new **end user IT support model**, enhanced by AI and automated workflows, will be put in place. The current IT proximity teams will be modernised into 'help and interaction centres'.
- **Continuous improvement of the security of the IT infrastructure** to prevent, detect and block cyberattacks on the Commission's systems. Reinforced security will remain a key priority. Governance will be supported by solid risk and compliance management and intensified cyber awareness activities. The proposed regulations on cybersecurity and information security⁵³ will be fundamental. Security will need to rely on improved endpoint protection (including strengthened authentication and access management), more use of digital certificates (digital signatures), more communication encryption, simplified password management, and enhanced attack detection and response capabilities that use more automation and machine learning.
- A **gradual offer of hybrid multi-cloud brokerage services**⁵⁴ by the Commission supported by a **Cloud Centre of Excellence**. This will be based on a secure public cloud and a secure private cloud. Stronger security will be ensured by integrating security services and tooling. A cloud brokering services will also be proposed to other EU institutions to strengthen the position of the institutions in the cloud market.

⁵² Communication on Greening the Commission, C(2022) 2230, see https://ec.europa.eu/info/files/communication-commission-greening-commission_en

⁵³ COM(2022) 119 and 122 final, see https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1866

⁵⁴ https://ec.europa.eu/info/sites/default/files/ec_cloud_strategy.pdf

The Commission will provide seamless and secure integration between public, sovereign, and private cloud services. This will enable handling increased flows of data, make new digital solutions possible and ensure the necessary level of data protection.

The Commission's experience and expertise enables it to support resource-efficiency across the EU institutions by providing the following:

- **brokerage of public, private and sovereign services with support for security;**
- **secured hosting** services enabling a high availability communication infrastructure (governmental network) for exchanging sensitive and classified information between public authorities⁵⁵;
- **cybersecurity standards.**

⁵⁵ For example, the central hub of the EU Digital COVID-19 Certificate platform runs in the Commission's data centre and currently connects over 60 participating countries.

3. ENABLERS

This corporate strategy for the Commission’s digital transformation relies on several enablers: the **buy-in** of all departments, support by **digital leaders**, enhanced **governance**, appropriate **roles and mandates**, adequate **resources**, and a well-defined **Corporate Architecture**.

- **Digital leadership**

For a successful digital transformation, the leaders of the organisation must ‘think digital’ and welcome, nurture and drive digitalisation. The Commission’s senior management are best positioned to take on this leadership. It is the role of digital leaders to understand the potential of technology to achieve their departments’ goals, empower staff, and realign people, culture, tasks and the organisational structure to respond to a changing technological environment.

Under the guidance of the Directors-General, digital transformation must be part of all departments’ plans and operations (e.g. management plans⁵⁶ and digital transformation roadmaps).

- **IT Corporate governance**

Digital transformation governance encompasses both **compliance with corporate decisions and approaches** and **flexible mechanisms promoting co-innovation, co-ownership and co-design** of business solutions. In this context, the relevant IT governance bodies of the Commission will continue to rethink their roles and set clear priorities in line with the strategic objectives of this strategy. IT Corporate Governance will support the digital maturity of the Commission and the implementation of this digital strategy.

- **Roles and mandates for digital transformation players**

Digital transformation relies both on key business players (such as Policy officers, Legislative coordinators etc.) and on actors from the IT domain (such as the IT and Cybersecurity Board (ITCB), the central IT department and local IT, IT security and data management resources in each department⁵⁷.) A new role of a Digital Transformation Officer, as an evolution of the current Information Resource Manager, will ensure alignment between business and IT.

A digital transformation community will be built around these roles to further align local and corporate priorities and ensure a common perspective. The Commission’s Human Resources strategy is a key enabler for organisational change and thus for the digital transformation of the Commission.

⁵⁶ Digital transformation heading of the Commission’s management plans.

⁵⁷ Notably Information Resource Managers (IRMs)/Digital Transformation Officers (DTOs), Local Information Security Officers (LISOs), Local Data Correspondents (LDCs); see *Figure 7*.

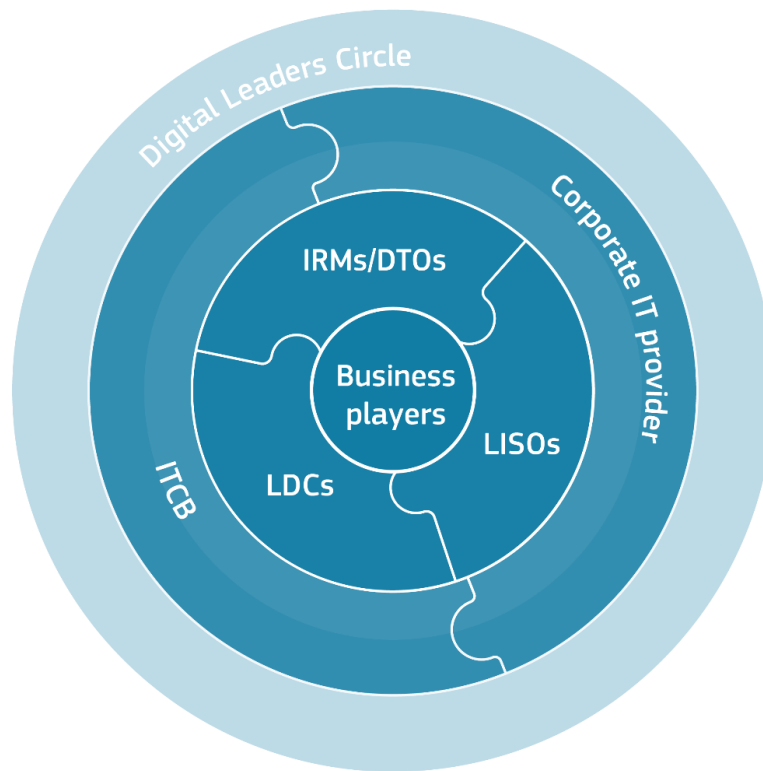


Figure 7: Digital transformation players

As the **corporate IT provider**, the central IT department of the Commission has the key role to ensure digital-ready policies and corporate IT strategies, approaches and initiatives, and support and guide departments' digital transformation goals via timely and customised advice and other services. It promotes interoperability, fosters innovation, coordinates data and knowledge management, and maintains the Commission's cybersecurity and infrastructure resilience.

- **Resources**

IT funding in the Commission is based on a stable and predictable budget⁵⁸, which prioritises rationalisation of the IT portfolio. Resources are limited and cannot easily be increased to cater for one-off needs. Therefore, the challenge is to ensure that all investments within existing budgets also support the digital transformation. This will be achieved by the systematic review of all IT investments against this strategy's objectives and principles. Any savings from changing priorities or synergies can be used to create a common budget to fund innovation pilots, prototypes and proofs of concept, thus helping accelerate the transformation.

- **Corporate Architecture**

Digital modernisation needs to be supported with the right instruments to tackle the challenges of transformation. By aligning infrastructures and developments with business expectations, corporate architecture provides key components and a governance structure to support the digital transformation. A well-crafted corporate architecture ensures that the IT

⁵⁸ As delivered by the 2020 reform on the co-financing of Corporate IT (C(2020)6126), as well as the 2021 agreement on a clear budget planning for IT spanning the current MFF (SEC(2021)250 final, Part 6/6, Doc. V bis.

investments provide the greatest value to the Commission, supporting the vision of a seamless digital landscape. Corporate architecture also connects the strategy, data, business, and technology layers together, by centralising knowledge and establishing roadmaps to enable adequate and agile transformation, and foster innovation.

- **Tracking progress**

An annual report based on key indicators, of the state of the Digital Commission and the achievement of the five strategic objectives will be presented to the IT and Cybersecurity Board and the Corporate Management Board. These indicators will be selected in view of their relevance and ease of data collection to avoid administrative burden on Commission departments. As part of this report, the relevant Boards will also receive an update on the completion of actions and initiatives (rolling action plan), covering all current and future strategies for specific IT domains. Together with the annual budget process, this streamlined reporting on inputs (actions and initiatives) and on outcomes and impacts will enable these governance bodies to understand and steer the Commission's digital transformation in a holistic way.

ANNEX 1. INDICATIVE LIST OF KEY ACTIONS PER STRATEGIC OBJECTIVE

The following key actions will be pursued with an overall target date of 2024. They will be further operationalised as part of a rolling list of ongoing digital actions.

Strategic Objective 1 – Foster a Digital Culture

The digital Commission will empower staff to think digital first, be people-centred, collaborative, innovative and agile, and support digital transformation.

This objective will be supported by:

- boosting the Innovation Lab and setting up a Digital Innovation framework in the Commission;
- developing the Digital Leaders Circle concept and creating a digital transformation community;
- providing specific career guidance and incentives to encourage organisational change and digital culture;
- setting up learning packages per functional profile and a medium-term planning and mapping of the digital-related profile needs;
- strengthening cybersecurity training for all staff.

Strategic Objective 2 - Enable digital-ready EU policymaking

The digital Commission will integrate digital dimensions across the EU policy cycle.

This objective will be supported by:

- setting up an inter-department advice mechanism for digital-ready policymaking;
- proposing EU legislation on interoperability;
- preparing digital-ready policymaking guidelines to support the Better Regulation Tool 28 implementation.

Strategic Objective 3 - Empower business-driven digital transformation

The digital Commission will harness the benefits of data and innovative technologies to redesign its business and administrative processes, thereby improving efficiency and supporting integrated EU policies.

This objective will be supported by:

- implementing the Artificial Intelligence action plan;
- digital transformation roadmaps by every department;
- launching a digital transformation award to gather examples of and encourage digital transformation flagship projects in departments.

Strategic Objective 4 - Ensure a seamless digital landscape

The Digital Commission will have a stronger focus on corporate information systems, ensuring seamless data exchange in a secure cloud environment.

This objective will be supported by:

- applying the ‘reuse, buy, build’ (or dual pillar) approach in all decisions;
- launching a corporate architecture community of practice;
- promoting collaboration among departments through the DSMP community;

- implementing a new integrated IT delivery model;
- the further development of the Open-Source strategy.

Strategic Objective 5 - Sustain a green, secure and resilient infrastructure

The digital Commission will have a solid infrastructure composed of multi-cloud environments, a fast, stable and secure network, and will be a trusted provider of infrastructure services to EU institutions.

This objective will be supported by:

- implementing a new end user IT support model;
- launching and implementing a new IT security strategy;
- implementing new regulations on cybersecurity and information security in the EU institutions, bodies and agencies;
- rolling out the WELCOME domain to all staff.