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eHealth Strategy Austria

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SUMMARY

Background

Digitalisation can contribute to maintaining, supporting, and restoring health in a broader sense. It can also support the provision of a reliable basis for decision making in health policy and public health. However, it is important to shape digitalisation in a way that takes the quality of care, equal opportunities, and social values into account. In order to design and use digitalisation in the public interest, investments in appropriate infrastructure, participation, and control mechanisms are required. Citizens, patients, and health care providers must be able to trust digital solutions and be supported while using them.

Austria has a highly functional public health system that is supported by a well- established eHealth infrastructure. This forms a solid basis for the application of digital solutions, with the electronic health record (ELGA) serving as one of its key components. What has been missing so far – and is becoming increasingly important due to the challenges in the healthcare system (an ageing population, staff shortages, etc.) – is a consolidated, nationwide strategy for digitalisation in healthcare.

The present document establishes such a strategy and defines objectives and measures for the period from 2024 to 2030. This eHealth Strategy is intended to represent a vision supported by all relevant actors within the system which allows the initiation, coordination, implementation, and evaluation of developments related to digitalisation.

Method

The Austrian Federal Target-Based Governance Commission tasked an "eHealth Strategy Working Group" to develop an Austrian eHealth Strategy. This working group was chaired by the Federal Ministry for Social Affairs, Health, Care and Consumer Protection (BMSGPK) and supported by the Austrian National Public Health Institute (Gesundheit Österreich GmbH, GÖG). In the first half of 2023 a first version of an Austrian eHealth Strategy was developed in a series of eight meetings.

Existing Austrian and EU-wide strategies and implementation plans for digital health were considered when developing this eHealth Strategy. The procedure was as follows:

- Defining overarching and procedural guiding principles,
- Developing a vision for the year 2030,
- Deriving strategic and operational goals as well as activities aligned with the vision,
- Prioritising the proposed activities.

In November 2023, the draft strategy was presented at a kick-off event and discussed with an expert audience. The draft has since been developed further based on input from six working groups and a series of expert interviews with key stakeholders.

Results

This document is a summary of the first Austrian eHealth Strategy, which has been coordinated between the federal government, federal states, and statutory social insurance institutions as well as with the Austrian stakeholder landscape. The following strategic objectives are at the heart of the eHealth Strategy:

- S1. Enabling digital access to the healthcare system
- S2. Setting up telehealth prevention and care services
- S3. Extending health telematics infrastructure (HTI)
- S4. Providing centralised eHealth services/components
- S5. Establishing registers relevant for healthcare and governance
- S6. Strengthening the secondary use of health data
- S7. Making innovation accessible
- S8. Strengthening digital skills

Operational goals have been developed for each of these strategic goals. The operational and strategic goals are accompanied by several overarching and procedural principles. For each operational goal, concrete activities have been defined. In addition, the activities have been evaluated and prioritised timewise, differentiating between short, medium, and long-term activities.

This strategy is committed to the idea that digitalisation can contribute to preserving and restoring health in a broader sense if used in the right way. It pursues the goal of defining and subsequently developing a common vision for eHealth and digitalisation in health and care in Austria.

Conclusion

The present eHealth Strategy is a living document. The strategy will be implemented in close coordination with the 2023 Healthcare Reform and the 2024 Federal Target-Based Governance Agreement. For this purpose, an implementation plan and a monitoring framework will be elaborated. The strategy itself will be revised after five years, in 2028, mirroring the duration of the fiscal equalisation mechanism negotiated between the federal government, federal states, and municipalities.

Keywords

eHealth, digital health, digitalisation, health telematics, innovation

Illustrations

Tables

Abbreviations

AI Act	Artificial Intelligence Act
AIT	Austrian Institute of Technology
BMSGPK	Federal Ministry of Social Affairs, Health, Care and Consumer Protection
B-ZK	Federal Target-Based Governance Commission
CDA	Clinical Document Architecture
DESI	Digital Economy and Society Index
DiGA	Digital health applications
EC	European Commission
EHDS	European Health Data Space
EHR	Electronic health record
ELGA	Austria's electronic health record
ePR	Electronic patient file
EU	European Union
GÖG	Gesundheit Österreich GmbH
HTI	Health telematics infrastructure
HCP	Health care providers
HL7	Health Level 7
IHE	Integrating the Healthcare Enterprise
KPI	Key performance indicator
ÖGKV	Austrian Healthcare and Nursing Association
SNOMED CT	Systematised Nomenclature of Medicine Clinical Terms
WHO	World Health Organization

DIGITAL HEALTH APPLICATIONS

Digital health applications are software applications (web applications and apps) that are considered medical devices as defined by the European Medical Device Regulation (Regulation (EU) 2017/745). The products are approved (and labelled accordingly with a CE mark) and can support patients, for example, when treating illnesses or compensating for impairments.

DIGITAL HEALTH LITERACY

Digital health literacy is the ability to find, understand, evaluate, and apply digitally available health information or information on health services and to use the digital technologies on offer.

E-HEALTH

Cost-effective and safe use of information and communication technologies to support health and health-related service areas including healthcare services, healthcare services monitoring, health education, training, and research.

HEALTH CARE PROVIDERS (HCPS)

Persons and organisations which provide healthcare services such as medical treatment, care, or nursing care or which support patients in exercising their rights are referred to as health care providers.

HEALTH TELEMATICS INFRASTRUCTURE (HTI)

All components of IT and telecommunications used for the processing of genetic data pursuant to Art. 4 no.13 GDPR, biometric data pursuant to Art. 4 no.14 GDPR, and health data pursuant to Art. 4 no.15 GDPR in digital form; HTI that is established or operated under its own responsibility or on behalf of public bodies is considered a public HTI. 1, 2

PRIMARY USE OF HEALTH DATA

The primary use of health data means the processing of personal health data for the provision of healthcare services for the purpose of assessing, maintaining, or improving the quality of health or restoring the health status of natural persons on the basis of these data including the prescribing, dispensing, and provision of medicines and medical devices, as well as for relevant social administration or reimbursement services.

SECONDARY USE OF HEALTH DATA

Secondary use of health data refers to further processing of electronic health data for a purpose other than the provision of healthcare services or related primary purposes for which the data were originally collected (see the purposes listed in Section IV of the EHDS Regulation). The data used may include personal health data initially collected for primary use as well as health data collected for secondary use.

1 Federal Act on Partnership-based Health Target Management as of 18.04.2024

2 WHO. mHealth, use of appropriate digital technologies for public health – Report by the Director-General. Exec Board, 142nd Sess provisional agenda item 44 EB142/20. (2017) 2015 (November 2017): 1–5.

TELEHEALTH

Telehealth refers to the provision or support of healthcare services (including the areas of health promotion, prevention, and aftercare) using information and communication technologies. Either patients and health care providers (HCPs) or two different HCPs are not present at the same location. A distinction can also be made between synchronous, i.e. simultaneous, and asynchronous, i.e. time-delayed, telehealth services. There is a broad range of telehealth applications which, in addition to the aspects mentioned above, also differ in terms of the type of service or the aim of the application along the care chain. Between HCPs this includes teleconsultation (asynchronous) and teleconferencing (synchronous). Between patients and HCPs this covers synchronised variants such as teleconsultation, telediagnostics, and teletherapy and, as an asynchronous variant, telemonitoring. These various teleapplications can, in turn, be used in different medical specialities (e.g. dermatology, surgery, pathology).

TELEMEDICINE

Telemedicine is to be understood as a sub-concept of telehealth and focusses on applications in the field of medical care.

1. INITIAL SITUATION

Austria has a highly functional public healthcare system that is supported by well-established eHealth infrastructure. What has been lacking to date – and is becoming increasingly important in view of the challenges in the healthcare sector (an ageing population, staffing situation, etc.) – is a consolidated, nationwide strategy for digitalisation in the area of health and care. This document establishes such a strategy and defines objectives and measures for the period from 2024 to 2030.

This strategy is based on a definition of e-health that is located at the intersection of medical informatics, public health, and business (Eysenbach 2001). E-health can be understood as the use of information and communication technologies in health-related products, services, and processes. Combined with structural changes in the healthcare system, e-health can contribute to improving health and efficiency in the provision of healthcare services (BMSGPK 2019). The World Health Organization (WHO) defines e-health as "the cost-effective and safe use of information and communication technologies to support health and health-related areas, including health services, health monitoring, health education, training and research" (Executive Board 2017). Recent definitions of the term digital health (Kostkova 2015) point to the relevance of the use of data and information and are based on a broad concept of health that does not just mean the absence of illness. Digitalisation can support the maintenance and restoration of health in a broader sense, offering patients and customers a better service. It also makes it easier to provide a reliable basis for decision making for health policy and public health. However, it must be designed in a way that takes the quality of care, equal opportunities, and social values into account. This strategy is committed to the idea that digitalisation can contribute to maintaining, improving, and restoring health in a broader sense if it is used in the right way.

Digitalisation in the health and care sector

In Austria, the topic of e-health has been on the agenda of health policy decision makers since the 2000s. An e-health strategy was developed back in 2007, which was based on the European action plan and was created as part of the Austrian e-health initiative. Some federal states also support e-health and the digitalisation of health care in the form of regional e-health strategies. Meanwhile, there are health telematics infrastructures that form a solid basis for the application of digital solutions. One central component is the electronic health record (ELGA), which was agreed between the federal government and federal states in 2012 with the involvement of the social insurance organisation: its implementation was coordinated by ELGA GmbH, which was founded in 2009. As an information system, ELGA guarantees access to health data for citizens and health care providers (HCP) regardless of location and time. Within the framework of ELGA, it is possible to exchange findings between HCPs. Electronic prescriptions can be issued and the dispensing of medication can be documented. The availability of medication data across HCPs increases patient safety and simplifies processes. Furthermore, a centralised vaccination register enables the vaccinations to be documented in the form of an electronic vaccination record. There are plans to expand the applications currently available in ELGA to include features such as the integration of living wills and advance directives, authorisations, the provision of parent-child pass data and the option of telemonitoring.

The use of telemedicine in Austria gained momentum due to the COVID-19 pandemic but even before that there were public efforts to promote telemedicine and set up a framework for its use. On a political level, for example, the Telehealth Services Commission was set up in 2013 and drew up recommendations for introducing telemedicine services in standard care. Building on this, a project group worked on recommen-

dations for further developments in Austria in 2015. In addition, a framework guideline for IT infrastructure to enable the use of telemonitoring was developed and telehealth services and telemedicine were anchored in the 2017–2021 target control agreement at federal level. Some telemedicine services have since been established in Austria but their expansion as a central component of the public healthcare system is still being discussed.

As part of the agreements under the Article 15a B-VG on the organisation and financing of the healthcare system, various objectives were set regarding the further development of information and communication technologies. The results of the most recent fiscal equalisation mechanism for the period 2024–2028 and the associated healthcare reform underline the importance of digitalisation and e-health for the Austrian healthcare system.

Currently, the use of digital health applications (health apps, websites) is not regulated sufficiently in Austria and is characterised by legal uncertainty. Therefore, efforts are being made by the federal government, federal states, and social insurance institutions to support sensible and high-quality use of health apps in the healthcare sector and to provide guidance regarding the large number of health apps available privately.

Digitalisation in the healthcare sector is leading to an increase in the quantity and diversity of healthcare data. The use of high-quality health data is relevant for health care as well as for research and system control. Austria has a good data situation by international standards but accessibility and linkability in compliance with data protection regulations are often not given, which limits the usefulness of data sources.

Not only in the medical sector but also in the care sector, the question as to how digitalisation can be used in the interests of patients and clients as well as to relieve the burden on nursing staff is becoming more important than ever, given the lack of resources and the workload. Some digital tools are already available for efficient documentation and process support. There are also supporting digital technologies for the care work itself, both for the institutionalised context and in the area of care by relatives. The challenges in this context are the accessibility and interoperability of the systems plus the interfaces between the health and care sectors (e.g. in relation to transitions from care to medical care and vice versa).

Opportunities and challenges of digitalisation in the health and care sector

The use of e-health applications in health care and nursing brings benefits for various target groups. For citizens, the accessibility of medical information and services is potentially increased, as they can access health information and services (Barbosa et al. 2021) via the internet or mobile applications regardless of time and place. Applications that facilitate the tracking of symptoms or the monitoring of health parameters can improve the management of diseases and increase patient empowerment (Renzi et al. 2022). Telehealth solutions offer more flexible ways to receive medical support, improving care in rural areas and for patients with limited mobility alike (Kruse et al. 2021; Wong et al. 2022). Digitally available health data and their linkage help HCPs give well-informed medical advice, diagnoses, and treatment and can contribute to improved processes and treatment pathways. Improved communication between HCPs can also support coordinated and seamless health care in the sense of integrated patient care, ensuring prompt expert support (Shaw et al. 2017). This leads to a higher quality of service provision and at the same time creates opportunities for the efficient use of resources. Overall, digital solutions help ensure that health care can be customised for patients and that they can take an active and informed approach to their own health. They

therefore offer various opportunities to increase the quality of care, patient safety, and efficiency (Shaw et al. 2017).

In addition to the benefits, the digitalisation of the healthcare system also comes with a number of challenges that need to be addressed in order to realise the full potential of digital solutions. Regarding the use of digital health services, there are socio-economic, gender, and age-related inequalities that can be attributed to differences in access to the internet and technologies but also to differences in the digital health literacy of different population groups (Cornejo Müller et al. 2020; World Health Organization. Regional Office for Europe 2022). The different levels of digital health literacy also play a role in HCPs. In order to ensure comprehensive, low-threshold access to and use of digital health information and services, aspects of equal opportunities and digital health literacy must be taken into account when expanding digital solutions in the healthcare sector (World Health Organization. Regional Office for Europe 2022). The ease of use of the solutions and the possibility of low-threshold use mentioned above must be ensured. Analogue support services or additional or alternative use of existing physical access options to the healthcare system (e.g. with the e-card, photo ID) must be available.

Another challenge in relation to digitalisation in the healthcare sector is the creation of a regulatory and organisational framework that offers security for all stakeholders and thus promotes the implementation and use of innovative digital solutions at all levels of care (Saigí-Rubió et al. 2022; Wong et al. 2022). A key aspect here is ensuring data protection, which is also relevant for the acceptance of digital solutions and, in addition, has ethical implications. However, it is also important to regulate and promote the interoperability of health data through mandatory standards and to ensure the evidence-based nature of reimbursed digital solutions that are integrated into the care process. Legal certainty with regard to the use of health applications such as telemedicine solutions and a clearly defined reimbursement process are relevant for HCPs and must be defined accordingly in order to increase acceptance and use in this user group.

Legal and technical framework

The most important legal basis for Austria's current health telematics infrastructure is the Federal Act on Data Security Measures for the Processing of Electronic Health Data and Genetic Data (Health Telematics Act 2012 – GTelG 2012), Federal Law Gazette I No. 111/2012 as amended. The GTelG 2012 and the ordinances based on it (Health Telematics Ordinance 2013, ELGA Ordinance 2015) set out the basic provisions for the secure transmission of health data and information management in the Austrian healthcare system. Section 4 defines ELGA, Austria's electronic health record, and Section 5 deals with e-health applications, in particular the electronic vaccination record.

The GTelG 2012 and the ELGA Regulation 2015 also define the general technical framework and standards for Austria's health telematics infrastructure. Of particular importance here are HL7 CDA as the standard for the document-based exchange of healthcare data, selected IHE profiles for the standardisation of processes and transactions, and SNOMED CT as the medical nomenclature. In addition, the 2018 framework guidelines for IT infrastructure for the use of telemonitoring and the 2023 Digital Health Standards Catalogue Austria should be mentioned.

The principles of the electronic social insurance administration system and the e-card infrastructure are set out in the 4th subsection of the General Social Insurance Act, Federal Law Gazette No. 189/1955 as amended by Federal Law Gazette I No. 69/2023. Other relevant federal laws are the Medical Devices Act, Federal Law Gazette I

No. 122/2021 in the version of Federal Law Gazette I No. 27/2023, the Epidemics Act, Federal Law Gazette No. 186/1950 in the version of Federal Law Gazette I No. 9/2023, and the Federal Act on Documentation in Health Care, Federal Law Gazette No. 745/1996 in the version of Federal Law Gazette I No. 191/2023.

As part of the fiscal equalisation mechanism and the 2023 Healthcare Reform, the framework is legally defined within which the health target management partnership (federal government, federal states, statutory health insurance institutions) will promote digital support for the public healthcare system (Health Target Management Act, Federal Law Gazette I No. 26/2017 as amended by Federal Law Gazette I No. 3/2024). The contracting parties are committed to the technological support of care processes. In line with this eHealth Strategy, they will create and further develop a framework for the broader use of e-health services (see Art. 7(4) of the agreement pursuant to Art. 15a B- VG on the organisation and financing of the healthcare system).

The legal framework in Austria is embedded in applicable EU law, first and foremost the General Data Protection Regulation (Regulation (EU) 2016/679), which sets out the EU legal framework for the processing of health data.

The legal framework for the availability and processing of health data in the area of health care (primary use) as well as in other areas (secondary use, e.g. in research and health policy) will be redefined by the regulation adopted in 2024 to create a European Health Data Space (EHDS), with extensive implications for digital support of the public healthcare system. The aim of the EHDS is to improve access for patients and HCPs to relevant health data (across borders) for the purposes of medical care. In addition, the aim is to provide a better data basis for research and health policy decision making. The EHDS also redefines requirements for the market authorisation of digital health record systems (electronic health record systems). This strategy has been designed with EHDS implementation in mind.

Another EU legislative initiative addresses the topic of artificial intelligence (AI). The Artificial Intelligence Act (AI Act) creates rules and a legal framework for the safe and trustworthy use of AI within the EU. This includes requirements for security, data protection, and transparency. AI systems are to be categorised into different risk levels based on the type of AI application and the planned field of use, each of which is subject to different regulations.

Other EU legal acts that are important for the healthcare sector and this strategy are the European Data Governance Act (DGA) and the Medical Device Regulation (Regulation (EU) 2017/745) for medical devices. In the area of cybersecurity, the NIS-2 Directive (Network and Information Security Directive, Directive (EU) 2022/2555) defines the main EU legal requirements.

International context

Supranational strategies and initiatives

In 2021, the WHO published their **Global Strategy on Digital Health.** Developed after extensive preparatory work, this strategy covers the period from 2020 to 2025 and sets out goals and a framework for action to exploit the opportunities offered by digitalisation in the healthcare sector. The WHO's objectives are to

- promote cooperation and partnership between nations and regions with regard to knowledge transfer as well as resource-saving and sustainable growth,
- support countries in the development, adaptation, and strengthening of their individual digital health strategies,
- strengthen governance structures, and
- design people-centred healthcare systems (health literacy, gender equality).

Behind the **action framework "Commit, Catalyse, Measure, Enhance and Iterate"** there is an implementation plan for each strategic goal with impact targets, policy measures, and proposals for the (short [1–2 years], medium [2–4 years] and long-term [4–6 years]) measures of member states (WHO 2021).

There are various initiatives at European level that aim to take account of developments in the e-health sector. The **"Path to the Digital Decade"** proposed back in September 2021 outlines concrete steps to promote innovation and investment in the areas of digital skills, digital infrastructures ,and the digitalisation of companies and public services (European Commission 2023b). This was supplemented in December 2022 by the "European Declaration on Digital Rights and Principles". The European Union (EU) is pursuing a people-centred, sustainable vision for a digital society throughout the Digital Decade to empower citizens and businesses alike. The political programme, Digital Decade, sets out digital ambitions for the next decade in the form of clear, concrete goals:

- a digitally skilled population and highly qualified ICT specialists,
- secure and sustainable digital infrastructures,
- the digital transformation of companies,
- the digitalisation of public services.

To track progress towards these digital targets, the European Commission (EC) has integrated the Digital Economy and Society Index (DESI), the annual monitoring of Europe's digitalisation performance, into the State of the Digital Decade report. In line with this decision, DESI's key performance indicators (KPIs) should be used to measure underlying trends at national level (European Commission 2023c). For example, the KPIs for measuring progress address the nationwide, seamless availability of an electronic patient record and access to electronic identification services. The index focuses on four key areas that are of vital importance for digital transformation. These include human capital in relation to digital skills, connectivity, the use of digital technologies by companies, and digital public services.

Examples of national digitalisation strategies in other countries

Australia's National Digital Health Strategy was published in 2023 and sets out a comprehensive plan over a five-year period (2023–2028) that defines the direction for the country's digital health future. Consistent and continuous efforts are required in four areas, so-called change enablers. The strategy focuses on four outcomes aimed at improving Australia's health system. Designed as a living document, this strategy sets out a vision and pathway to create a digital health system that is aligned with both the current and future needs of Australians, namely one that is digitally connected and people-centred, harnessing the benefits that digital technology offers (Australian Digital Health Agency 2023a). To realise this vision, the strategy is supported by a Strategy Delivery Roadmap that defines clear and measurable steps for implementation. The roadmap comprises twelve priority areas that help achieve the planned outcomes. Each of these areas includes initiatives that show partners how they can contribute to success (Australian Digital Health Agency 2023b).

In **Germany,** a national strategy for the digitalisation of the healthcare system by 2030 was adopted in 2023. It was developed in view of various challenges such as the shortage of skilled labour, rising healthcare costs, and an ageing population and is part of the broader national digitalisation strategy (Federal Ministry for Digital Affairs and Transport 2022). Under the heading of "networked society", the German digitalisation strategy for health and care aims to use digital solutions to overcome these hurdles. The strategy is divided into visions and aims, strategic fields of action, digitally literate citizens, the regulatory framework, stakeholders, and the transformation approach (Department 5 – Digitalisation and Innovation 2023).

To ensure the optimal implementation of the strategy and its short, medium, and long-term measures following the publication of the final report in March 2023, a continuous cooperation framework has been created in the form of working groups. These groups are responsible for identifying potential for improvement and technical parameters as well as for developing proposals for solutions. Progress is to be monitored using suitable identifiers and instruments (e.g. measuring levels of digital maturity) and reviewed and revised every two years. One aspect of the strategy initially includes treating digital and analogue care processes equally (if equivalent and taking economic efficiency into account) and strengthening the digital skills of all stakeholders (Department 5 – Digitalisation and Innovation 2023).

In 2023, **France** presented a digital health roadmap that defines a series of priorities and objectives along the following four axes: prevention, care, access to healthcare, and a favourable environment. Among other things, a reminder system for preventive services and recommended examinations is to be implemented in the national health portal between 2023 and 2027. An evaluation framework for digital medical devices is to be created and these should be increasingly incorporated into standard care. Telehealth solutions are to become part of the care of chronically ill people. Digital health training should be integrated into all basic training courses and further education programmes for all professional groups working for HCPs. A platform is to be established for independent HCPs to assess their satisfaction with HCP software. In order to strengthen the digital health skills of citizens, 10,000 e-health mediators will be trained to help people in France access digital health services.

A ministerial e-health delegation (Délégation ministérielle au numérique en santé) is responsible for the French digital health roadmap. It was developed together with partners such as the national health insurance fund (Caisse nationale de l'assurance maladie) and the e-health agency (Agence du Numérique en Santé) as well as other stakeholders. The implementation of the roadmap will be evaluated in parallel (Agence du Numérique en Santé 2023).

Austria in international comparison

Austria undoubtedly has a solid foundation and infrastructure for digital health services. With a well-established healthcare system, advanced technology, and a strong base of specialists, there are many prerequisites for being a leader in the field of digital health. Nevertheless, Austria still lags behind other countries in an OECD comparison, for example in terms of the proportion of adults using telemedicine solutions.

According to the OECD, one reason for this discrepancy is the lack of functionality in the existing solutions. Austria has a solid technological infrastructure and a number of existing applications, but these focus on the HCP-to-HCP level. More applications and functions are needed that would be more attractive for patients to use. From online appointments and reminder systems to more complex telemedical services, there is still untapped potential according to the OECD. The fact that digital solutions are not integrated sufficiently into HCP workflows and the limited functionality of electronic patient records are cited as further areas with potential for improvement (OECD/European Observatory on Health Systems Policies 2023). On the other hand, the results of the DESI Index for 2023 with regard to electronic patient records show that Austria is above average (fifth place) in the EU27 comparison for the indicator "Access to health data in electronic health records" (European Commission 2023a). Austria is therefore categorised as a "leapfrogger" in this indicator in the "Digital decade e-health indicators development" (European Commission et al. 2023). At the same time, however, the OECD cites the limited functionality of electronic patient records as an obstacle to the further development of digital solutions in the healthcare system. In addition, the OECD anticipates that the governance system in the healthcare system and research would benefit from an increased use of data, although electronic infrastructure such as ELGA has already been set up (OECD/European Observatory on Health Systems Policies 2023).

According to the OECD, the secondary use of ELGA data is not yet fully utilised either. Existing routine health data sets are not sufficiently linked and analysed for research, statistical, or monitoring purposes. As a result, Austria scores lower than some other EU countries in terms of data governance and utilisation (ELGA GmbH 2023; Oderkirk 2021). In order to exploit the full potential of health data, more intensive linking and analysis are required to improve the quality of care and research. The provisions of the EHDS are also expected to expand the possibilities for secondary use in Austria.

A national and federal strategy for digital health is crucial in order to overcome existing challenges such as the lack of patient-facing applications coupled with fragmentation and the inefficiencies in the system cited by the OECD, among others. Harmonised guidelines and standards can help promote interoperability and innovation between different systems, thus improving the quality of care and patient experiences.

2. VISION AND GOALS OF THE EHEALTH STRATEGY

Digitalisation can bring about great benefits in the area of health and care but it can also be very disruptive (Kickbusch et al. 2021). If it is to be shaped and utilised in the public interest, investments need to be made in appropriate infrastructure, participation, and control mechanisms. Citizens, patients, and HCPs must be able to trust digital services and be supported by them in their mission – to maintain and restore health. In order to achieve this efficiently, a vision supported by all relevant system stakeholders is required that allows developments relating to digitalisation to be initiated, coordinated, and reflected upon.

The aim of this strategy is to define this shared vision for e-health and digitalisation in the area of health and care in Austria and to develop it further. The time horizon of the strategy in its current version is 2030. The strategy should be formulated in the interests of patients and citizens and refer to different target groups:

- citizens
- patients and clients
- HCPs
- research and system control.

This document is the first nationwide strategy to be agreed between the actors involved in target-based health management – the federal government, federal states, and social insurance institutions – as well as other relevant stakeholders.

Technological trends: A look towards 2030

By 2030, changes will have taken place in public healthcare systems in Europe and worldwide that have been influenced not only by external shocks (population development, pandemics, climate change, etc.) or developments within the sector (prevention, new roles for healthcare professions, etc.), but also by technological trends.

These technological trends, which extend beyond the healthcare sector but influence it too, naturally include the field of AI. For example, generative AI could lead to a reorganisation of key processes and tasks in the healthcare sector. These include documentation, reporting, image processing for better and earlier recognition, appointment management to reduce missed appointments, creating digital twins to increase the success rate of treatments and reduce treatment times, simulating and detecting cyberattacks, improving data quality, automating tasks in the healthcare sector, and improved drug development. Speech recognition and text production can relieve the burden on healthcare professionals and create more time for patients. In addition, machine learning can help doctors identify risk factors at an early stage or create personalised treatment plans. In the future, AI-driven robots will also help with care. As operating theatre robots, therapy robots, or nursing robots, for example, they can support medical or nursing staff with routine tasks.

Improvements in prevention, diagnosis, and therapy are also promised by the real-time networking of intelligent medical devices (including patient-side devices) or the use of virtual and augmented reality (e.g. in mental health and surgery, etc.).

By combining a greater variety of medical data, diagnoses can be made at an early stage, disease progression can be better monitored, and treatments can be improved. Digital methods also make it possible to bring treatment closer to the patient; this means, for example, that a patient has basic analysers available at home and that the data are transmitted electronically and discussed with medical staff via video consultation. Another area of technological development is platforms for “virtual worlds” related to health, in which virtual visits to the doctor, physiotherapy supported by virtual reality, or other forms of health-related interactions become possible.

Patients also continue to research illnesses online and take the information they find there to their consultations with doctors and other healthcare professionals. In the future, this search for information will be increasingly supported by AI. Assessing the quality of the results is becoming more and more important. Health professionals must also be prepared for this and be trained in communicating with patients as well as in utilising and critically evaluating the technological possibilities.

Changes in digital support for health care and healthcare provision will continue to open up new data sources in the future. Health data will become quantitatively more extensive and qualitatively more diverse and better. For example, data that were previously collected on the patient's personal health and fitness status can also help obtain a better overall health picture. In addition, more and more genetic information will be available that can play a role in prevention, early diagnosis, and treatment.

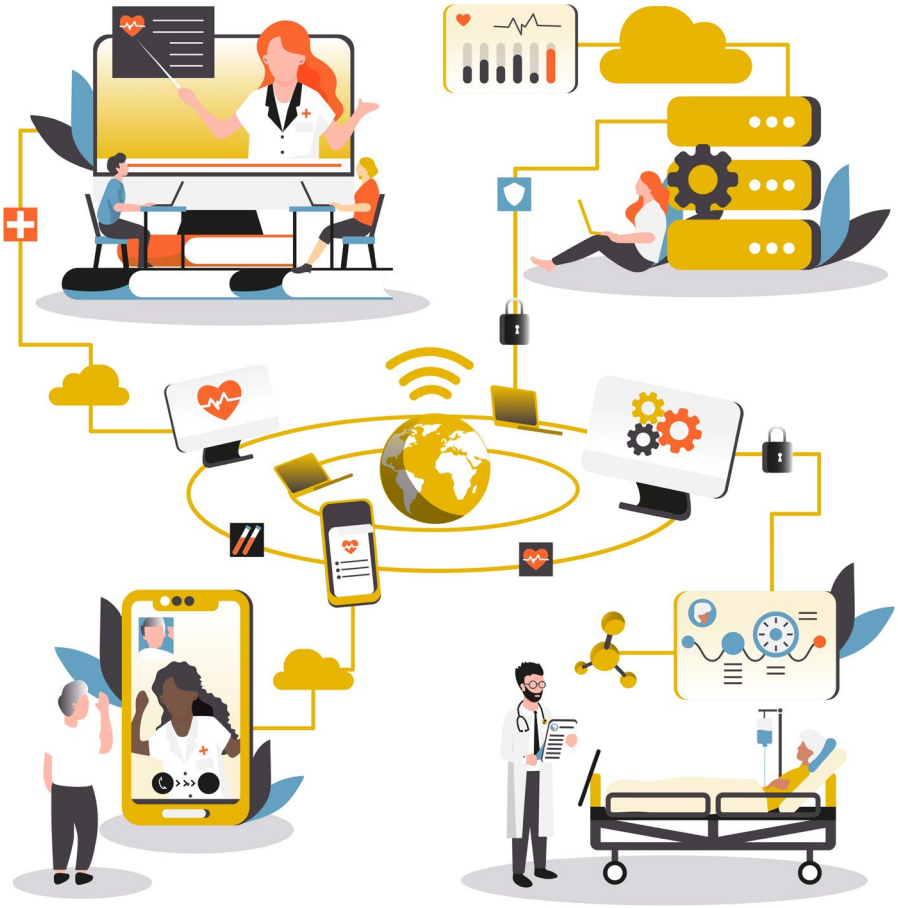
The volume and complexity of data (and data collection points) pose challenges for data transmission and network security. Further developments in 5G and 6G networks will enable large amounts of data to be transmitted in real time – which will be relevant for medical image data, for example. Further developments in the area of clouds and diversified computing in general, as well as developments in the area of standards and norms, will also play a role in being able to process enormous volumes of data.

All of these technological developments offer opportunities, but also risks – for example, in terms of data protection and data security. Their actual relevance to care, security, and effectiveness as well as their far-reaching effects must be justified on the basis of evidence. In this sense, the technological possibilities mentioned must be taken into account in the implementation of this strategy.

The vision: Future scenario 2030

The following vision forms the basis for this Austrian eHealth Strategy: In 2030, the Austrian public healthcare system will be organised according to the principle of "digital before outpatient before inpatient", from prevention to aftercare. Digital services improve access options, the quality of care, and the provision of information. Every healthcare professional involved in a patient's care has access to healthcare-relevant health data, made possible by seamless standardised records along the entire care pathway. The improved use of health data strengthens the relationship between HCP and patients, increasing the quality of treatment as well as opportunities for research and system control.

- Citizens can identify themselves digitally and be represented within the Austrian public healthcare system in an e-government-compliant manner. They are informed about health services via digital channels and receive targeted information on health promotion and prevention on request. They can find support services to strengthen their digital health literacy. They are informed about the benefits and possibilities of using their health data.
- Patients receive digitally supported help at the right time and in the right place – at home or at various HCPs. They use digital tools and access points to the healthcare system. They can find health information via suitable low-threshold services as well as information on the best point of care. They are digitally supported while identifying suitable healthcare services, for example through digital appointments, telephone consultations, telemedical services, and structured health data. Patients with chronic conditions are continuously supported when dealing with their illness, with analogue and digital services (visits, telephone, and video consultations, etc.) and different levels of care being seamlessly interlinked. For the care or aftercare of people with chronic conditions, the relevant health information is available digitally at any time and for all relevant stakeholders (patients, HCPs, relatives, etc.), e.g. on the history of diabetes or a cancer survivor. Patients are supported in the self-management of their condition if they wish, for example through recommendations and access to digital health applications.
- HCPs and their employees have a clear framework within which they can use digital tools for the care of their patients and clients. These digital provisions, such as a connection to the ELGA infrastructure or the use of AI-supported software, improve their business processes (workflows, documentation, cooperation across sectors and healthcare professions, etc.) and services and at the same time enable high-quality documentation of necessary healthcare data. HCPs provide training programmes to expand the digital skills of their employees and support them in their use. Together with their patients, they make decisions about suitable digital health applications, such as a health app to support therapy.
- Decision makers in health policy and administration have digital tools at their disposal for effective public health interventions, for example for planning and implementing measures in future pandemics. There is secure and data protection-compliant access to anonymised or pseudonymised health data for legitimate research and system control purposes.
- Innovators in the field of digitalisation in the healthcare sector are informed about the opportunities and parameters for market participation. They will find information on the need for innovation in the public healthcare system as well as the legal framework, the available interfaces, and the relevant standards.



This vision gives rise to the following strategic objectives for this strategy:

- S1. Enabling digital access to the healthcare system
- S2. Setting up telehealth prevention and care services
- S3. Extending health telematics infrastructure (HTI)
- S4. Providing centralised eHealth services/components
- S5. Establishing registers relevant to healthcare and governance
- S6. Strengthening the secondary use of health data
- S7. Making innovation accessible
- S8. Strengthening digital skills

The strategic objectives are presented in detail in the following chapter and are accompanied by a series of overarching and procedural guiding principles.

3. GUIDING PRINCIPLES, OBJECTIVES, AND MEASURES

This strategy defines the vision outlined for a digitally supported public healthcare system in 2030. Based on this vision s series of guiding principles were defined for the implementation of the strategy. Moreover, the strategic and operational goals, subsequently defined in the form of measures, are derived from this vision.

Overarching guiding principles

With the following overarching guiding principles, the federal government, federal states, and social insurance partners define the canon of values within which this strategy is to be understood, and its implementation is to be ensured.

- Patients and the quality of care are at the heart of the strategy. Considering both digital and analogue options, the aim is to enhance access and care options in a patient-centred manner and to continuously optimise integrated care.
- The strategy supports and pursues the idea of a learning healthcare system. This requires relevant data, monitoring, and a strong evaluation culture.
- The legal and financial parameters for implementing the strategy must be guaranteed in the long term.
  - Financing principles, the challenge of protecting investments, and the need for clear mandates are to be considered when implementing the objectives and measures.
  - The budgetary principles apply, namely economic viability and cost effectiveness (efficiency) as well as expediency (impact).
  - The principle of integrative partnership in health target management applies.
- Implementing the strategy requires clear structures and suitable organisation: attention must be paid to efficiency potential, the use of synergies, and the avoidance of parallelism.
- Public and care-related measures are particularly important and should be implemented in line with the principle of benefits in kind.
- Digitisation projects must be designed in such a way that data protection and data security standards are met.
- The strategy has been drawn up in the knowledge that the EU legal framework and requirements must be complied with, especially with regard to the European Health Data Space.

Procedural guidelines

Alongside the overarching guiding principles, which reflect the values of the system partners, the following procedural guiding principles apply:

- The strategy is a living product and will be adapted on a cyclical basis.
- The eHealth Strategy is based on the assumption that elements of the Austrian e-government infrastructure and the necessary digital infrastructure are available in Austria (broadband, etc.) and can be used in the eHealth sector.
- The strategy should form the basis for concrete implementation projects and facilitate a common position in national and international committees and strategies, for example in order to utilise EU funds in a coordinated manner.

- The strategy is geared towards refining the public healthcare system but also considers the necessary interfaces to private applications and provides orientation for HCPs and citizens alike.
- In order to ensure the efficiency and effectiveness of new digitalisation projects in the healthcare sector, the infrastructure and processes of the public healthcare system must be taken into account while it is implemented and continuously refined.
- Participatory approaches (co-design, user tests, etc.) are essential to ensure that digital solutions are citizen- and patient-centred and inclusive.
- In terms of a learning healthcare system, digitalisation is not an end in itself but serves the good of society. The aim is to continuously develop the healthcare system on the basis of structured, networked, and data-supported care.

Goals and measures

Against the background of Vision 2030 and taking the overarching and procedural guiding principles into account, the following objectives have been set.[3]

Strategic objective S1: Enabling digital access to the healthcare system

In the future, initial contact with the healthcare system should generally be digitally supported, whereby equal opportunities in access must be ensured. Mobile digital services should provide citizens with low-threshold access to the appropriate care. Healthcare itself is digitally supported at all levels of care.

3
A distinction is made between strategic and operational objectives. In the case of operational goals in particular, the aim is to define SMART goals, i.e. specific, measurable, appropriate, realistic, and achievable.

Operational objective O1.1
All citizens and health care providers have open access to Austria's public HTI in accordance with legal requirements (EU and national). All HCPs involved in the digitally supported care process are connected to Austria's public HTI.

Operational objective O1.2
The principle of "digital before outpatient before inpatient" applies, taking the benefits for citizens, digital health literacy, equality of access, and equal opportunities into account. At all levels of care, including the areas of health promotion, prevention, and aftercare, digital services are used to provide support where it makes sense and is beneficial. In doing so, emphasis must be placed on freedom from barriers and equal opportunities. Analogue paths must be offered in parallel and remain possible – "digital/mobile first" must be voluntary.

Operational objective O1.3
By 2030, the public healthcare system will systematically enable the integration and roll-out of digital applications in healthcare and nursing under controlled conditions.

The following measures have been defined for the period 2024 to 2030 to achieve the operational targets:

MEASURE	OPERATIONAL GOALS	PRIORITISATION
M1.1 Establish a jointly defined, publicly accessible health portal as a further development of the ELGA citizen portal, taking into account/coordinated by gesundheit.gv.at, ELGA Bürgerportal, MeineSV, and Gesundheitsberatung 1450, ideally available as both a website and an app.	O1.1	Medium term (2026–2028)
M1.2 Build on and exploit the potential of health counselling in line with the principle "digital before outpatient before inpatient".	O1.2, O1.3	Short term (2024–2026)
M1.3: Specify and define processes for booking appointments online for healthcare and social professions.	O1.2	Short term (2024–2026)
M1.4: Implement the option of scheduling appointments online for healthcare and social professions.	O1.2	Medium term (2026–2028)
M1.5 Digitalise care processes, including compliance with standards for cross-sectoral care, taking into account the need for integrated care models (e.g. in the area of chronic conditions).	O1.2, O1.3	Medium term (2026–2028)
M1.6 Introduce a digital living will using public HTI with low-threshold access for patients.	O1.2	Short term (2024–2026)
M1.7 Create a standardised process for evaluating digital health applications (DiGAs) and digital care applications (DiPAs) and subsequently introducing them in healthcare if there are demonstrable benefits.	O1.2, O1.3	Short term (2024–2026)
M1.8 Implement use cases as envisaged in the EHDS based on the public HTI.	O1.2, O1.3	Medium term (2026–2028)

TABLE 1: MEASURES FOR STRATEGIC OBJECTIVE S1

An essential basis for implementing the measures under Objective S1 is to ensure that all citizens can participate digitally in the healthcare system. It is equally important that all HCPs and social professions involved have access to the health telematics infrastructure thanks to a comprehensive role concept. If digital contact poses a challenge for citizens as well as patients or is rejected by them, low-threshold analogue options must remain available. It is also important to consider support services in relation to the use of digital solutions in order to promote their implementation and acceptance. In addition, legal aspects regarding the principle of "digital before outpatient before inpatient" must be clarified and, if necessary, adapted to provide a regulated and clear framework.

In order to ensure the sustainability of implementing digital applications, the requirements for sustainable financing must be clarified at an early stage, internationally established standards (HL7/FHIR, IHE) for the public and private sectors must be utilised, and a focus must be placed on the usability of these digital applications. Evidence-based care processes and idealised guidelines for HCPs are essential prerequisites and foundations for the implementation of digital applications. Data should be processed and made available in compliance with the EHDS, including the private sector (e.g. from digital health applications in the private sector). In addition to the EHDS-compliant supplementation of the health data made available by HCPs for healthcare, provision should be made for data sharing by citizens.

The principle of "digital before outpatient before inpatient" should always be viewed as a step-by-step process, with responsibilities clearly defined at each stage. Patient pathways should not only be digitally supported at the initial contact but also at every stage if possible. Health counselling 1450 should function as a central digital entry point. Expanding it with services such as teleconsultation, chatbots, AI, and online appointment booking could add value, e.g. by simplifying patient pathways or removing access barriers. Both HCPs and citizens should be involved in these developments to ensure usability and acceptance. A unified, publicly accessible health portal, which is linked to other portals, should be established as a low-threshold central contact point.

Strategic objective S2: Setting up telehealth prevention and care services

In its various forms, telemedicine has the potential to improve the accessibility and quality of healthcare in Austria. Especially under the motto of the "digital first" principle (see S1), telehealth can enhance the healthcare landscape in combination with other services. The system partners are committed to developing and expanding telehealth prevention and care services, taking equal opportunities in access to healthcare into account.

Operational objective O2.1
A network of telehealth services is being set up to improve patient care and build on the health counselling service.

Operational objective O2.2
Telehealth supports cooperation between HCPs in the sense of integrated care.

Operational objective O2.3
Providers of telehealth solutions and their users have a clear legal and organisational framework and requirements for their participation in the public healthcare system.

The following measures have been defined for the period 2024 to 2030 to achieve the operational targets:

MEASURE	OPERATIONAL GOALS	PRIORITISATION
M2.1: Develop standardised specifications and processes for telehealth solutions and their connection to public HTI (with regard to interoperability, data interfaces, use cases, etc.).	**O2.1, O2.2**	**Short term (2024–2026)**
M2.2: Continue developing the legal framework for telehealth.	**O2.3**	**Short term (2024–2026)**
M2.3: Develop guidelines for providing telehealth services (capabilities, limitations, prerequisites, obligations, equipment) including definitions of structural and procedural quality criteria (digital health structure plan) and targeted outcomes.	**O2.1, O2.2**	**Short term (2024–2026)**
M2.4: Transfer and scale up best-practice solutions for telehealth supporting the cooperation between HCPs in the sense of integrated care.	**O2.1, O2.2**	**Short term (2024–2026)**
M2.5: Develop a concept, pilot project, and implementation plan for nationwide telehealth care services including processes while taking different settings into account.	**O2.1**	**Short term (2024–2026)**
M2.6: Rollout of nationwide telehealth care services including processes.	**O2.1**	**Medium term (2026–2028)**
M2.7: Information and communication measures on the possibilities and limitations of telehealth for citizens and HCPs	**O2.1, O2.2**	**Short term (2024–2026)**

TABLE 2: MEASURES FOR STRATEGIC OBJECTIVE S2

For the implementation of telehealth services, it is essential to clarify financing in advance including remuneration for telehealth services and interface financing. E-government principles (such as ID Austria or area-specific personal identifiers) and internationally recognised standards (HL7/FHIR, IHE) should be utilised or, where necessary, created during implementation. Existing preparatory work such as the framework guidelines for telemonitoring IT infrastructure must be taken into account when developing telehealth services. Defining and using uniform standards enables projects to be developed on a modular basis and adapted to regional needs. During the development process, it is advisable to identify not only national but also international best practices and to analyse their transferability. To be able to develop a nationwide telehealth service efficiently, it is crucial that it is coordinated as closely as possible across federal states.

From a legal and technical perspective, the identification of patients is a central topic. This should be as low threshold as possible to facilitate the use of telehealth solutions. The legal basis should check whether all the foundations for telemedicine-specific organisational forms are currently in place. In addition, the topic of prevention is not currently included in the Health Telematics Act and should be added, where applicable, as telehealth services could also be helpful here.

The planned use cases should be defined at the outset for the sustainable implementation of a nationwide telehealth service. This includes the question of settings in which telehealth services are available, e.g. in underserved areas, from home, or as an assisted option that can be made available in pharmacies or health kiosks. The question as to whether some telehealth services should focus on off-peak hours and which professional groups should be addressed may also be relevant. There is potential for telehealth solutions at the interface between the health and care sectors (e.g. wound management, medication, therapy). The topics of tele-rehabilitation and other non-medical services should also be included in the concept development and implementation.

It should also be borne in mind that telehealth solutions need to be assessed in terms of their quality. This raises the question of suitable certification procedures (cf. the discussion on DiGA). The evaluation of telehealth applications should be considered from the outset.

Strategic objective S3: Extending health telematics infrastructure (HTI)

With ELGA, the e-card system, and existing e-health applications, Austria has created a solid basis for the digital support of intramural and extramural care processes. An undirected HCP-to-HCP exchange of findings is supported, as are electronic prescriptions, the safe dispensing of medication, and the documentation of vaccinations. Additional applications such as telemonitoring, living wills, parent-child passes, and integrated care are currently being developed. However, the infrastructure itself must be continuously developed in terms of its architecture, its operation must be ensured, and the integration of relevant stakeholders must be promoted. The following operational goals are assigned to strategic goal 3:

Operational objective O3.1
Public HTI in Austria provides a solid foundation for far-reaching digitalisation in the health and care sector. Digitalisation projects in 2030 and beyond are integrated into public HTI and are supported by it.

Operational objective O3.2
By 2030, public HTI will have a standardised and future-proof legal framework, including the possibility of continuously developing and adapting its financial and legal framework.

Operational objective O3.3
The operation of public HTI is continuously ensured. There will be no significant outages (in ELGA, the healthcare networks, eHealth applications) up to 2030 and beyond – application-specific service levels for availability are agreed upon and adhered to.

Operational objective O3.4
By 2030, public HTI will have a modern, innovative architecture and infrastructure that will enable ongoing adaptation even beyond 2030.

Operational objective O3.5
By 2030, all HCPs relevant to the supply process will be connected to public HTI and will use it. In addition to the currently connected HCPs, these primarily include outpatient clinics, primary care units, laboratories and radiology facilities, care facilities, dentists, PRIKRAF hospitals, private doctors.

Operational objective O3.6
By 2030, public interfaces to the public HTI will be available making it possible for partners outside the public healthcare system to access and use the processes and structures of the public HTI.

Operational objective O3.7
Cybersecurity and compliance with NIS guidelines (Directive (EU) 2016/1148) are continuously reviewed and further developed.

The following measures have been defined for the period 2024 to 2030 to achieve the operational targets:

MEASURE	OPERATIONAL GOALS	PRIORITISATION
M3.1: Draft a new Health Telematics Act (GTelG)and develop/revise further legal bases with the aim of generalisation (e.g. of core concepts), flexibilization (e.g. regarding storage duration), and compliance to EU requirements (EHDS) incl. electronic identification and clarification of security issues.	O3.1, O3.2, O3.5	Short term (2024–2026)
M3.2: Creating a legal obligation for HCPs to document via the public HTI.	O3.5	Short term (2024–2026)
M3.3: Technical connection of all HCPs and social professions relevant to the care process to public HTI, including the creation of mobile connection options.	O3.5	Long term (from 2028)
M3.4: Ensure stable operations and their ongoing modernisation.	O3.1., O3.3	Short term (2024–2026)
M3.5: Continue developing the authorisation system.	O3.3, O3.4, O3.6	Short term (2024–2026)
M3.6: Define a new architecture.	O3.4	Short term (2024–2026)
M3.7: Realise the new architecture.	O3.4	Medium term (2026–2028)
M3.8: Continue developing technical and interoperability standards (e.g. FHIR, covering additional professional groups, e.g. nursing) on which public HTI is based, and which are to be applied in it, and collaborate in the creation of new international standards.	O3.4, O3.5	Short term (2024–2026)
M3.9: Expand the security of public HTI and establish and expand the Austrian Health CERT.	O3.3, O3.4, O3.7	Short term (2024–2026)
M3.10: Apply EU requirements for network and information security.	O3.3, O3.4, O3.7	Short term (2024–2026)
M3.11: Participate in EU initiatives relevant to public HTI, associated adjustments, and infrastructure developments.	O3.1, O3.2, O3.4	Medium term (2026–2028)
M3.12: Determine, specify, and define the conditions of use of publicly available interfaces of public HTI.	O3.6	Short term (2024–2026)
M3.13: Implement, operate, and continue to develop the terms of use of publicly available interfaces of public HTI.	O3.6	Medium term (2026–2028)

TABLE 3: MEASURES FOR STRATEGIC OBJECTIVE S3

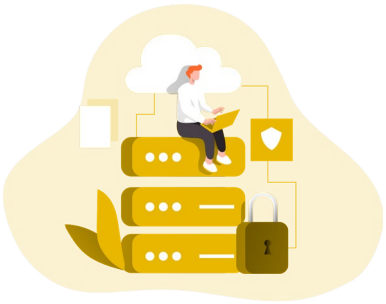
To ensure that mandatory use of HTI can be implemented as smoothly as possible, appropriate support services for HCPs (documentation support tools, etc.) and financial support for implementation should be considered. It is also important that the applications are easy to use and that the parameters are standardised, for example for all relevant types of findings in the outpatient and private practice sectors.

The further development of standards should be orientated towards international standards and national standards should be derived from them. Proactive participation by Austria in international developments around standards would be helpful in this regard. Including additional professional groups, such as nursing or advanced medical, therapeutic, and diagnostic health professions, would be recommended in national discussions regarding standards.

Additions to HTI, such as the creation of a notification system for undirected communication that notifies HCPs and citizens of newly added content, should be considered. This also applies to optional electronic delivery to patients via secure e- government channels. Another area for further development is the integration of information from the private sector into public HTI, if appropriate, whereby, for example, relevant information such as patient information leaflets or safety information could be displayed directly to the patient in a publicly accessible health portal (or subsequently in an app, for example).

Strategic objective S4: Providing centralised eHealth services/components

A functioning Austrian public HTI needs centralised services and components that support patients, service providers/HCPs, and system control. Some of these services and components must be assumed to be part of the overall Austrian e-government infrastructure. Other functions and components specific to the healthcare system have been defined as part of the eHealth Target Vision 2030 approved by the Federal Target-Based Governance Commission (see appendix).



Operational objective O4.1
Basic sector-independent e-government infrastructure allows relevant players to participate effectively in public HTI.

Operational objective O4.2
By 2030, the main health-specific services and components for participation in public HTI should be available.

The following measures have been defined for the period 2024 to 2030 to achieve the operational targets:

MEASURE	OPERATIONAL GOALS	PRIORITISATION
M4.1: Ensure technical use of ID Austria in the public healthcare system; prerequisite: ID Austria must be universally available and widespread in the healthcare sector.	O4.1	Medium term (2026–2028)
M4.2: Create the legal basis for the mandatory option of using eID services.	O4.1, O4.2	Short term (2024–2026)
M4.3: Ensure that applications in Austria's public HTI use centrally available information on representation regulations via ID Austria; prerequisite: the e-government representation module must be available 24/7 and the data (e.g. in the custody register) must be up to date.	O4.1	Medium term (2026–2028)
M4.4: Expand and improve the HCP index (complete, up to date, etc.).	O4.1	Short term (2024–2026)
M4.5: Define any additional health-specific requirements (content, availability, dissemination, and timeliness) for the representation module using ID Austria (custody, care relationships, parent-child, etc.); prerequisite: the additional requirements are adopted by the authorities responsible for the e-government representation module.	O4.1	Short term (2024–2026)
M4.6: Define and develop generic functions and central components for public HTI in accordance with a harmonised eHealth roadmap, including identification/authentication, role and rights models (incl. representation, organisational relationships, authorisation assignment), logging, information, notification, pseudonymisation, and anonymisation.	O4.2	Long term (from 2028)
M4.7: Adapt and finalise the eHealth roadmap and clarify the financial dependencies and parameters.	O4.2	Long term (from 2028)
M4.8: Ensure online services of public HTI are made eIDAS- compliant and are accessible for users outside Austria.	O4.2	Medium term (2026–2028)

TABLE 4: MEASURES FOR STRATEGIC OBJECTIVE S4

Funding must be clarified for the provision of central services and components and decisions must be made as to which services are to be developed publicly and which in cooperation with industry. Industry players need clear information about the standards to be used. Infrastructure and interfaces should be created in such a way that the various relevant players can use them, and more applications can be added to the infrastructure. Existing applications and their interfaces must be transparent and easy to find. The aim should also be to create nationwide solutions to as great an extent as possible to avoid different and proprietary procedures. When implementing measures, the focus should be on supporting those use cases for which good solutions already exist and which can be implemented quickly with appropriate funding (cf. integrated care, preventive examinations, applications at the interface between medicine and care, etc.).

Strategic objective S5: Establishing registers relevant for healthcare and governance

Federally mandated registers of specific health data are an essential part of the healthcare system. They support the quality of care, patient safety, and system control. In addition to explicitly legally mandated registers, virtual registers based on the linking of routine data – for which there is little to no need for additional data reporting – will become increasingly relevant. In addition to the registers provided for by federal law and based on routine data, there are other register-like collections of health data (study registers, intervention registers at specialist societies, etc.) that are not directly linked to the public healthcare system and its management but which can provide essential data when needed.

Operational objective O5.1
By 2030, Austria will have a clearly and transparently defined number of registers provided for by federal law and/or created via the earmarked linking of pseudonymised routine data.

Operational objective O5.2
Both in registers provided for by federal law with explicit data collection and in virtual registers based on the linking of routine data, health data are entered in full and in high quality via efficient, standardised interfaces aligned with the standards of the public RTI. The data are available for secondary use in system control and research via legally defined interfaces.

Operational objective O5.3
For health data sets not provided for by federal law, there are requirements regarding transparency (in terms of data quality, metadata, etc.), findability, accessibility (via secondary use interfaces), interoperability, and reusability.

The following measures have been defined for the period 2024 to 2030 to achieve the operational targets:

MEASURE	OPERATIONAL GOALS	PRIORITISATION
M5.1: Establish a process for transparent and evidence-based decisions on the management of federally mandated and routine data-linked registers.	**O5.1**	**Short term (2024–2026)**
M5.2: Revise and standardise the registration and usage interfaces.	**O5.2**	**Short term (2024–2026)**
M5.3: Define specifications for registers not prescribed by federal law with regard to interfaces and secondary data utilisation.	**O5.3**	**Short term (2024–2026)**
M5.4: Define measures to improve data quality in relevant registers.	**O5.2, O5.3**	**Medium term (2026–2028)**

TABLE 5: MEASURES FOR STRATEGIC OBJECTIVE S5

Governance of the landscape of public health data registers in Austria must focus on the professional necessity of registers. It is essential to decide which needs can be met through the further use of (linked) routine data sets, where additional data collection and reporting are required (e.g. also in the case of an outcome register), and which steps are necessary quality-wise in order to justify their use. At the same time, this means taking the costs for the registering organisations and for quality improvement into account when financing the registers. Depending on the register, relevance, and intended use, these can range between two extremes: from cases with no additional effort in terms of documentation to the need for specific resources for documentation experts.

With regard to the financing of data submission, consideration should also be given to graded documentation requirements (minimum data sets, optional additional documentation) and the allocation of additional funds if a certain level of data quality is achieved. In addition to funding, an incentive for data quality and completeness can also be information/transparency regarding the usefulness of the reported data. Consideration should also be given to the extent to which anonymised, linked data can be made available to the reporting bodies.

A key factor for data quality and completeness is the flexibility of the registration interfaces. Here, standardised interfaces that are as automated as possible and embedded in the software environments of the registering bodies (e.g. based on the FHIR standard) should be worked towards. Additional interfaces can be offered to enable flexibility where integration into the software environments is not or not yet possible. However, these interfaces (such as web masks or CSV uploads) should be the same across all registers and follow the same standards (e.g. with regard to data coding, identification, authentication).

In addition to the interfaces (data transmission standards), the metadata and data content as well as uniform standards for data registration are relevant in terms of standards. The FAIR principles (findable, accessible, interoperable, reusable) should be followed here and centralised terminology management based on the standards of health telematics infrastructure should be used (with standardised code lists, value sets, etc.). Register-keeping bodies should endeavour to comply with the once-only principle as far as possible by using register networks and the possibilities of e-government and to automatically consult information available elsewhere instead of requesting it again.

Strategic objective S6: Strengthening the secondary use of health data

Health data are not only of crucial importance for healthcare itself. Their secondary use in research and science as well as in the planning and management of healthcare systems is also essential. Austria has several relevant health data sets (diagnostic and performance data, billing data, medication data, quality data, demographic data, epidemiological data, etc.). However, their linkability and availability for secondary use are inadequate (OECD 2022). The system partners in the Austrian healthcare system are committed to the transparent and secure secondary use of healthcare data. Legal and organisational parameters and a governance structure must be created to enable the secondary use of health data for managing the healthcare system and for research purposes, taking into account data protection, data security, and the requirements of the EHDS.

Operational objective O6.1
A platform for the joint secondary utilisation of data from the healthcare sector has been established.

Operational objective O6.2
There is a clear legal and organisational framework as well as an overarching governance structure for the secondary use of health data for the purpose of system management and research. This framework is based on the requirements of the EHDS and, compared to the current situation, enables improved planning and control competences for those responsible for the system.

Operational objective O6.3
Data protection and data security standards are complied with.

The following measures have been defined for the period 2024 to 2030 to achieve the operational targets:

MEASURE	OPERATIONAL GOALS	PRIORITISATION
M6.1: Develop and update a target definition for secondary use for system control.	O6.1, O6.2	Short term (2024–2026)
M6.2: Prepare the implementation of the EHDS's requirements, national legal specifications (opt-out design, etc.), and the harmonisation of relevant processes.	O6.2	Short term (2024–2026)
M6.3: Develop a Health and Care Data Utilisation Act and adapt other relevant legal bases.	O6.2, O6.3	Short term (2024–2026)
M6.4: Develop a data and access model and clarify the relevant content.	O6.3	Short term (2024–2026)
M6.5: Define use cases for the utilisation of secondary data, including support for the development of AI algorithms.	O6.1, O6.3	Short term (2024–2026)
M6.6: Ensure organisational and technical implementation of the defined architecture, including coordination with data donation models	O6.1	Medium term (2026–2028)
M6.7: Establish a secondary utilisation committee with representatives of the target control system partners.	O6.2	Short term (2024–2026)
M6.8: Introduce measures to ensure data protection and data security.	O6.3	Medium term (2026–2028)
M6.9: Establish a sectoral data strategy including standard specifications for the registration, coding, and exchange of data.	O6.2	Short term (2024–2026)

TABLE 6: MEASURES FOR STRATEGIC OBJECTIVE S6

Not only the current national legal framework (Research Organisation Act, Federal Statistics Act 2000, GÖG Act, etc.) and the General Data Protection Regulation (GDPR) are relevant for implementing the measures but also the EU Regulation on the Establishment of a European Health Data Space (EHDS). This must be implemented within the scope of the legal possibilities in such a way that controlled, data protection-compliant secondary use can actually be made possible in Austria. For example, it must be clarified when health data are considered anonymised, who may access anonymised or pseudonymised health data and under what conditions, which pseudonyms are used to link the data sets, how the envisaged opt-out model, which is central to the Austrian public debate, is to be designed, how data access is to be as secure and standardised as possible, etc. Data-holding organisations, including those in the private sector, must be linked to the secondary use structure in accordance with the EHDS. This must also be available across borders in accordance with the EHDS requirements.

For a sustainable implementation of the EHDS provisions in Austria, trustworthy processes and institutions are essential, as is transparency with regard to the added value of secondary use. Expected benefits and potential damage must be considered, documented, and audited when enabling secondary use. Socio-economic dynamics must also be taken into account and the EHDS-compliant infrastructures for secondary use must be set up in such a way that the various data users gain access to data in a socially fair and sustainable manner. For example, there must be no favouritism towards data users who are better able to pay for the costs of provision than others. Basic public funding and the dependence on cost contributions by users must be balanced with a view to the overall societal benefit.

Strategic objective S7: Making innovation accessible

As in other sectors, digitalisation in the healthcare sector is, in itself, an innovation (cf. the digital temperature curve, electronic patient files, smart devices, etc.) but digitalisation is also a catalyst for broader, systemic innovation processes relating to the organisation of healthcare. From the perspective of this strategy, a structured and transparent approach to the topic of innovation is relevant. On the one hand, the public healthcare system itself must be and remain innovative, for example with regard to the continuous adaptation of Austria's public HTI and the legal framework. On the other hand, it must be defined how the public healthcare system deals with innovations that are developed outside the system, for example on the private market, and under what conditions they are integrated.

Operational objective O7.1
Those responsible for the public healthcare system have the resources and prerequisites to regularly take a holistic look at the possibilities of digital support for the healthcare system, identify solutions, and clarify and communicate the need for innovation.

Operational objective O7.2
Innovative players in the public healthcare system find incentives, suitable conditions, and clear rules to implement innovations in the system.

Operational objective O7.3
By 2030, providers of digital innovations should have transparent requirements and processes in place to clarify whether their solution is relevant for public HTI and under what conditions it could be included in standard care.

The following measures have been defined for the period 2024 to 2030 to achieve the operational targets:

MEASURE	OPERATIONAL GOALS	PRIORITISATION
M7.1: Establish a process for regular reflection on the effectiveness and timeliness of public HTI and digital support in public healthcare; identify needs for innovation, for example in the area of public HTI or digitally supported care, and provide targeted support to meet these needs.	**O7.1**	**Medium term (2026–2028)**
M7.2: Define common minimum requirements for digitization promotion and innovation-oriented public procurement, and compliance with these requirements in the event of a possible roll-out of developed and/or procured solutions.	**O7.2, O7.3**	**Short term (2024–2026)**
M7.3: Employ an evidence-based definition of innovation needs (specific subject areas, etc.), support services for innovators, and definitions of pathways from pilot projects or studies to standard care (cf. M1.7 for DiGAs).	**O7.3**	**Short term (2024–2026)**
M7.4: Identify topics and *best practices* within Austria and in other countries with the help of horizon scanning.	**O7.1**	**Short term (2024–2026)**
M7.5: Continue to develop the Austrian Digital Health Standards Catalogue.	**O7.2, O7.3**	**Medium term (2026–2028)**
M7.6: Make use of communication measures to strengthen the culture of innovation and define safe spaces for experimenting with new solutions (e.g. regulatory sandbox concept).	**O7.2, O7.3**	**Short term (2024–2026)**

TABLE 7: MEASURES FOR THE STRATEGIC OBJECTIVE S7

Funding is a key parameter for innovation in the healthcare sector: Innovative projects must continue to be adequately funded and supported in their scaling. Innovators must be able to recognise and understand the needs of the public healthcare system. Implementing institutions such as hospitals or care facilities need resources for innovation-oriented tenders and the strategic procurement of relevant innovative solutions. Thus, cooperation between players in the sectoral innovation system is important. In addition, fundamental barriers to innovation must be overcome (information asymmetries, etc.) and technical prerequisites for digital innovation must be created – both intramurally (e.g. nationwide Wi-Fi) and extramurally (e.g. network capacities, storage costs). This is the only way that innovative solutions can actually be integrated into standard care across the board.

Access to health data and interdisciplinary collaboration between different professions are also key foundations for innovation in the healthcare sector. In this context, the creation of a regulatory *sandbox*, i.e. an independent regulatory environment in which new solutions can be tested at a low threshold, can represent an opportunity for interdisciplinary, low-threshold collaboration and promote innovation.

Involving users, i.e. patients and HCPs, in the development of digital solutions is also relevant. This could be integrated as a minimum requirement when awarding funding. The care-centred nature of the solutions developed and the living environment of the patients addressed should also be taken into account.

A more centralised coordination of the promotion and purchase of innovative digital solutions could make the fragmented system in the area of innovation clearer and enable innovative solutions to be implemented (more quickly) across the borders of the federal states and institutions and reach standard care in a simpler and more targeted manner.

Strategic objective S8: Strengthening digital skills

Digitalisation processes are successful if the people who can or should use the digital tools are involved in their development and are familiar with their use. In addition to appropriately designed technology development processes (user-centred, participatory), this requires adequate digital skills. These must be promoted and ensured for patients and HCPs alike. Digital health literacy encompasses both the ability to find, understand, evaluate, and use the health information and information on health services available digitally and the ability to use the digital technologies on offer. Promoting and ensuring digital literacy is also of great importance in terms of equal opportunities.

Operational objective O8.1
Across all healthcare professions, digital skills are an established part of the training and further education programmes for healthcare providers and can be considered a pre-requisite for the use of digital tools in the public healthcare system.

Operational objective O8.2
Citizens in Austria have nationwide access to quality-assured and user-friendly services in the field of digital health literacy.

Operational objective O8.3
HCPs in Austria enable low-threshold and user-friendly access to digital services and care offerings for all citizens.

The following measures have been defined for the period 2024 to 2030 to achieve the operational targets:

MEASURE	OPERATIONAL GOALS	PRIORITISATION
M8.1: Provide communication packages on Austria's public HTI and relevant digital applications for citizens and patients.	O8.2	Short term (2024–2026)
M8.2: Provide multilingual digital health information and services in plain language.	O8.2	Medium term (2026–2028)
M8.3: Establish measures to assess the trustworthiness of digitally available health information to build trust and to strengthen critical health literacy.	O8.2	Medium term (2026–2028)
M8.4: Monitor the digital health literacy of the Austrian population and the HCPs on a regular basis.	O8.1, O8.2, O8.3	Medium term (2026–2028)
M8.5: Establish nationwide support measures for the use of digital tools in the Austrian healthcare system.	O8.2	Long term (from 2029)
M8.6: Provide a communication package on Austria's public HTI and relevant digital applications for HCPs.	O8.1	Short term (2024–2026)
M8.7: Provide communication guidelines and training for digital/virtual communication between HCPs and patients.	O8.1, O8.3	Medium term (2026–2028)
M8.8: Set up initiatives and alliances with training centres for relevant healthcare professions to integrate digital health literacy into training curricula.	O8.1	Medium term (2026–2028)
M8.9: Develop concepts for training and further education programmes on digital health literacy for HCPs.	O8.1	Long term (from 2029)
M8.10: Define digital competence profiles for HCPs.	O8.1	Medium term (2026–2028)
M8.11: Analyse/monitor the role of generative AI in the health and care sector.	O8.1, O8.2	Medium term (2026–2028)
M8.12: Establish measures to strengthen the competence of HCPs in terms of enabling easy and low-threshold access to digital health information.	O8.3	Medium term (2026–2028)
M8.13: Establish a coordination and certification centre for digitally available health information.	O8.2	Long term (from 2029)

TABLE 8: MEASURES FOR STRATEGIC OBJECTIVE S8

Digital health literacy is an important basis for efficient and comprehensive digitalisation in the healthcare sector and should therefore be strengthened for patients and health care providers alike.

When implementing the measures, existing tools and results from work in the field of (digital) health literacy in Austria should be incorporated in a structured manner. The communication package on public HTI and relevant digital health applications is an important component for this, whereby the benefits of these digital health services should be emphasised as an incentive. Accompanying confidence-building measures for HCPs and citizens are also relevant in order to make digital health services widely available.

In connection with the dissemination of reliable health information, care should be taken to ensure that this is prepared in a user-friendly and low-threshold manner and ideally made available via a central platform. When revising the relevant curricula for HCPs (M8.8), digitalisation topics can be integrated into the already defined subjects as a cross-cutting topic. With regard to the establishment of training and further education courses, a basic cross-professional offer for all HCPs would promote common basic knowledge in the field of digitalisation in the healthcare sector. This basic training could subsequently be expanded to include profession-specific specialisation modules that are geared towards the digital skills profiles to be developed and make it possible to achieve these through defined further training courses.

4. FURTHER FIELDS OF ACTION

Gender equality and equal opportunities

Equal opportunities and gender-related aspects are cross-cutting issues that should also be considered in the digitalisation of the healthcare system to address and include all population groups equally.

Health equity refers to the fact that people should have fair opportunities to promote, maintain, and restore their health regardless of their individual and social characteristics (Richter/Hurrelmann 2009). Studies on health equity reveal the influence of socio-economic factors. People with a lower educational status or income have lower life expectancy and poorer physical and mental health overall. Age, gender, and a migration background are also known to influence health, whereby these factors are interdependent and influence each other (Gaiswinkler et al. 2023; Klimont/Prammer-Waldhör 2020; Richter/Hurrelmann 2009).

These socio-economic factors also have an influence in the area of digitalisation. Looking at the use of health apps, for example, studies show that people with a higher income and higher educational status use health apps more frequently while older and unemployed people show lower usage behaviour in comparison (Cornejo Müller et al. 2020). In order to design digital offerings in line with opportunities, it is therefore necessary to reflect on the factors that influence their use and usability.

The promotion of equal health opportunities has been defined as a health goal in Austria (Health Goals Austria 2023) and is also an important topic with regard to the digitalisation of the healthcare system: Digital solutions must not only be designed with equal opportunities in mind, they also have the potential to improve equal opportunities in the healthcare system. Examples include simplified access to medical information and treatment plans through digital offerings, regardless of geographical or social barriers. Better care in rural areas or for people with limited mobility can also be achieved through digital solutions such as telemedicine services.

However, in order to realise this potential, it must be ensured that access to digital health services is equally distributed and that the needs and concerns of different population groups are taken into account when providing digital solutions (World Health Organization. Regional Office for Europe 2022). In addition, potential users must also be motivated to use the digital solutions on offer. The digital health literacy of different population groups also has an impact on their acceptance and effective use (Cornejo Müller et al. 2020). In order to use digital health services or health information, it is necessary for the person concerned to have the appropriate skills to use them competently. If this is not the case, i.e. if there is a low level of health literacy, this is reflected in a lower use of digital health services. Studies also indicate that socio- demographic factors such as older age and lower education are associated with lower digital health literacy (Neter/Brainin 2012; Xesfingi/Vozikis 2016). The promotion of digital health literacy is therefore relevant in terms of equal opportunities and is also addressed as part of the eHealth Strategy (see strategic objective S8: Strengthening digital skills).

In terms of the use of digital solutions, there are gender-specific differences (World Health Organization. Regional Office for Europe 2022) but there are also issues concerning gender and gender equality in data-related aspects that should be taken into account.

One example here is a likely gender bias in databases, which arises from the fact that women are underrepresented in data sets or that no breakdown by sex or gender is possible. When creating apps, it is important to consider the assumptions on which they are based and whether findings from gender medicine are taken into account (Hametner 2022). Another relevant question concerns the issue of the data basis by which artificial intelligence learns as there is a risk that anatomical and physiologi-

cal needs are not incorporated adequately and are therefore not taken into account in the assessment of symptoms and the therapies based on them (Cirillo et al. 2020; Hametner 2022).

In order to make digitalisation in health care accessible to all population groups, it is important that gender and diversity aspects and the resulting needs are taken into account. Digital solutions must be designed to be barrier free and user friendly to ensure that all people can and want to benefit from the advantages of digitalisation, regardless of their technical abilities and physical limitations (Cornejo Müller et al. 2020; Wong et al. 2022; World Health Organization. Regional Office for Europe 2022). This eHealth Strategy can make a contribution to this by thinking about the topic and spreading it widely. The evaluation of the eHealth Strategy will also take socio-economic effects, gender aspects and potential effects on equal opportunities in health care into account.

Health promotion and prevention

Health promotion is a process that aims to enable people to gain more control over their health and improve it by influencing the determinants of health to strengthen their health resources (Fonds Gesundes Österreich). Prevention refers to the avoidance of diseases: Primary prevention aims to prevent diseases and health risks from the outset, secondary prevention aims to recognise diseases at an early stage, e.g. through check-ups, and to be able to treat them better through preventive measures or early therapy, while tertiary prevention aims to restore health after an illness (Fonds Gesundes Österreich). Digital technologies are opening up new approaches and opportunities in both health promotion and prevention.

Digital platforms or applications can create easier access to health information and resources for citizens and quality-assured preventive content can be disseminated using digital media. This can help to anchor a health-promoting lifestyle but the population can also be informed about preventive check-ups or vaccinations based on evidence and ideally via a central platform. Improved digital networking of health care providers also offers the potential for them to optimise the coordination of health measures and thus make it easier to provide more holistic care. This allows different aspects of health, such as nutrition, exercise, and mental well-being, to be better taken into account as a whole (Koh et al. 2021).

In addition to these information services, health promotion and prevention programmes can also be offered via digital media such as apps or platforms or supported by technology (e.g. through the use of fitness trackers). The use of digital technologies has the advantage that different sensory channels can be addressed and the content of digital health promotion or prevention programmes can be better stored (Willis et al. 2022).

Overall, digitalisation offers opportunities for health promotion and prevention by improving access to health information and services, increasing the efficiency and effectiveness of health measures, and promoting holistic care. However, it must always be borne in mind that the use of digital interventions requires users to have the appropriate skills and that vulnerable population groups must be taken into account.

Climate and health

Telemedicine plays a central role in the area of climate and health. The use of telemedicine in the healthcare sector offers a significant opportunity to reduce greenhouse gas emissions. According to Weisz et al. (2020), traffic caused by the Austrian healthcare sector accounts for around twelve per cent of the sector's CO_2 footprint, with patient mobility in the private practice sector accounting for the largest share, around 60 per cent. The expansion of telemedicine services could therefore enable significant reductions in emissions by reducing travel distances (Weisz et al. 2020).

Two recent meta-studies show that all previous studies on the environmental effects of telemedicine clearly indicate that significant savings in emissions can be achieved (Purohit et al. 2021; Ravindrane/Patel 2022). The savings potential per consultation through the use of telemedicine instead of on-site appointments is estimated at 0.7 to 372 kg CO_2e (Purohit et al. 2021). Even taking into account the emissions caused by the technical equipment for telemedicine (computers, video conferencing software, internet connections, etc.), the greenhouse gas footprint of a telemedicine consultation is 40 to 70 times lower compared to a face-to-face doctor-patient consultation (Holmner et al. 2014). While savings can be demonstrated in almost all areas of application, the savings vary depending on the geographical location, medical speciality, degree of specialisation, and technical basis for telemedicine.

Telemedicine services not only help to reduce emissions by reducing journeys but can also reduce the energy and resource consumption of healthcare facilities, which contributes to climate protection (Ravindrane/Patel 2022). This includes a reduction in the use of disposable medical products and disinfectants as well as lower energy consumption in hospitals due to a lower number of inpatient stays.

However, the use of telemedicine is not the only way to achieve positive effects on the climate. Digitalisation, process optimisation, and the use of software solutions can help to reduce emissions in the healthcare sector (Krojer 2022; Ludewig 2022). The introduction and expansion of the electronic health record (ELGA) in Austria is a key measure that not only conserves resources but also avoids incorrect medication and overmedication as well as the unnecessary use of emission-intensive diagnostic procedures. Automated building solutions such as intelligent lighting controls and disinfection robots with UV light help to reduce energy requirements and avoid waste in hospitals and care homes. Other measures to increase resource efficiency relate to supply chain management, goods management, and personnel deployment planning. In order to achieve positive effects on the climate, the following issues should be prioritised as part of the Austrian eHealth Strategy:

- Digitalisation and expansion of telemedicine services and ELGA: Digital innovations, in particular telemedicine and ELGA, offer considerable potential for reducing greenhouse gases in the Austrian healthcare system. They improve medical care and security of supply and reduce costs. Their expansion for climate protection and health promotion should therefore be driven forward.
- A clear legal framework for telemedicine: In order to support the expansion of telemedicine, it is important to establish clear legal guidelines for telemedicine as it is currently subject to various legal requirements in areas like data protection, professional law, and medical product law.
- A scientific assessment of the impact of digitalisation: The expansion of digital solutions requires a scientific assessment of their impact on greenhouse gas emissions, costs, and health in the Austrian context.

5. IMPLEMENTATION PLAN, MONITORING, AND EVALUATION

The Austrian eHealth Strategy is to be understood as a living product. This document is the first strategy for digitalisation in the healthcare system in Austria that has been developed in a participatory process, agreed with the main stakeholders in the healthcare system, and approved by the partners of the federal target management system. According to Art. 7(4) of the agreement pursuant to Art. 15a B-VG on the organisation and financing of the healthcare system, the implementation of the Healthcare Reform negotiated in the fiscal equalisation mechanism must follow the eHealth Strategy with regard to the broader use of eHealth services and the technological support of care processes.
In order to fulfil this requirement, the strategy must be translated into an implementation plan in close coordination with the Federal Target-Based Governance Agreement. The implementation of measures must be monitored and evaluated. The strategy is to be updated at regular intervals and – synchronised with the fiscal equalisation periods – renewed in 2028.

eHealth Strategy: Implementation plan

This document contains a set of measures that have undergone an initial rough prioritisation as part of the strategy process. More detailed planning of the individual steps, including their interdependencies, is required to implement the measures. This will begin in autumn 2024 in close coordination with the decision-making processes and preliminary work of the Federal Target-Based Governance Commission. The aim is to draw up an implementation plan that complements the strategy and serves as the basis for coordinating project definitions and commissions.

Monitoring and evaluation

This strategy will be continuously developed in accordance with the above-mentioned procedural guidelines. To enable this, the implementation of measures and the achievement of objectives will be monitored at regular intervals. As a framework for this, a monitoring concept will be developed at the beginning of the strategy period by close consulting the Federal Target-Based Governance Agreement.

In addition to monitoring the strategy, key measures are evaluated at appropriate intervals. The following dimensions play a central role here:

- Efficiency of implementation,
- Effectiveness of target achievement,
- Organisational and legal implications,
- Environmental and climate impact,
- Socio-economic effects,
- Effects on equal opportunities in healthcare,
- Gender aspects,
- Ethical aspects.

The precise evaluation dimensions and questions are to be defined for each measure.

6. MISSION AND DEVELOPMENT PROCESS

The mandate to develop the Austrian eHealth Strategy was issued by the Federal Target-Based Governance Commission in 2023. Specifically, a working group within the Standing Coordination Committee was tasked with developing such an eHealth Strategy in two phases. The work and content of these two phases are presented below.

Phase 1: Development of a draft version of the eHealth Strategy

In the first half of 2023, the eHealth Strategy Working Group, chaired by the Federal Ministry of Social Affairs, Health, Care and Consumer Protection (BMSGPK) and supported by Gesundheit Österreich GmbH (GÖG), held a total of eight meetings to develop a draft version of an Austrian e-health strategy.

Existing Austrian and EU-wide strategies and implementation plans were taken into account in their development. The following procedure was used:

- Defining overarching and procedural guiding principles,
- Developing a vision for the year 2030,
- Deriving strategic goals, operational goals, and measures aligned with this vision,
- Prioritising the measures on a timeline.

Phase 2: Participatory stakeholder process and finalisation of the eHealth Strategy

The aim of the participatory stakeholder process was to further develop, refine and ultimately finalise the eHealth Strategy with the involvement of relevant stakeholders.

In order to ensure this happened comprehensively, the objectives and measures of the eHealth Strategy were discussed at a kick-off event as well as in working groups and interviews:

- **Kick-off event:** This took place on 20 November 2023. The contents of the eHealth Strategy were presented and the objectives and measures contained therein were discussed in a world café setting. This initial input from the stakeholders formed the basis for the work in the subsequent working groups.

- **Working groups:** In the first quarter of 2024, six working groups were organised based on the objectives of the eHealth Strategy. The contents of each objective and the discussion points from the kick-off event were presented and discussed in these groups. With regard to the participants, care was taken to ensure appropriate representation of all stakeholder groups. The results of the working groups were recorded in statement papers and formed a central basis for revising the eHealth Strategy.

- **Interviews:** In order to gain additional cross-goal feedback from key stakeholders, interviews were conducted in the first quarter of 2023 with representatives of the Austrian Medical Chamber, the hospitals (Fondskrankenanstalten OÖG and the Vinzenz Group), the Association of Digital Healthcare Austria (Health Pioneers for short) and the Patient Advocacy Centre.

FIGURE 1: OVERVIEW OF THE PARTICIPATORY STAKEHOLDER PROCESS

The inputs collected from the stakeholder process were discussed with the eHealth Strategy Working Group and the eHealth Strategy was revised accordingly and submitted to the Federal Target-Based Governance Commission for approval. The eHealth Strategy was approved by the Federal Target-Based Governance Commission in June 2024.

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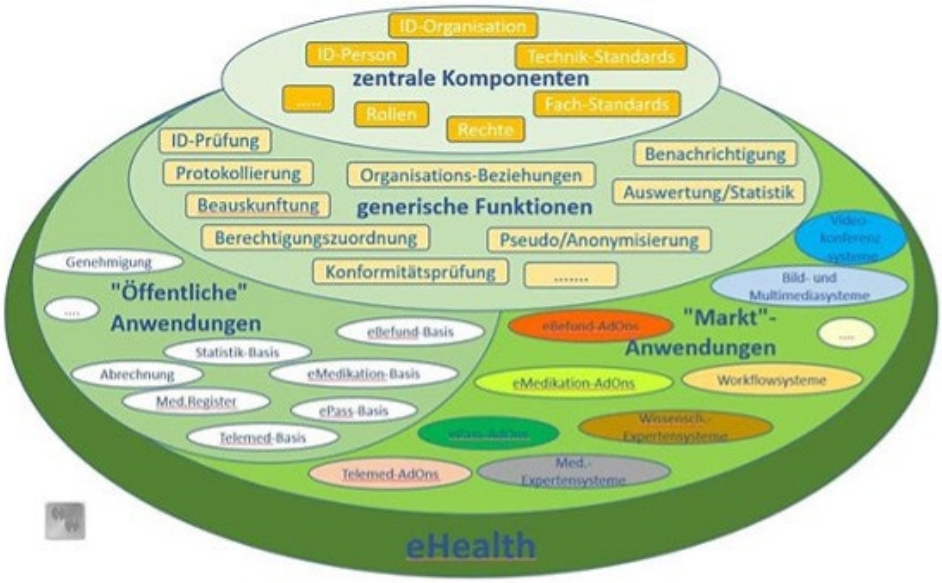

ILLUSTRATIONI: EHEALTH TARGET IMAGE
SOURCE: 17TH MEETING OF THE B-ZK ON 02.07.2021