



Digital Agenda 2030 – City of Vienna

Putting people first



Preface

Digitalisation must not be an end in itself. Its purpose is to provide solutions that work in practice and make people's everyday lives easier. For many people who live in Vienna, it has become more or less second nature to conduct their transactions with public authorities digitally – be it registering their place of residence or applying for a business licence or a resident's parking permit – and to play an active role in decisions impacting their city via Vienna's digital participation platform.

The Digital Agenda 2030 is our way of ensuring that we will continue to make the best possible use of technological advancements in the future while always putting the people of Vienna first. Vienna is set to remain a favourite place for people to live, work and attend school or university. To achieve this, we need tangible improvements in our everyday lives – this goes for digitalisation as much as for other areas – and technological development that goes hand in hand with social responsibility.

The Digital Agenda 2030 deliberately places an added focus on how we should deal with the downsides of digitalisation: fake news, cybercrime, cyber bullying, deep fakes and a host of other developments are raising concerns among Vienna's inhabitants. These are issues that a city, along with other local government entities, is called upon to address. We have set up a Cyber Crime Helpline and are going to further expand municipal services and support in this area. For, be it in the real world or in the digital one, Vienna's fundamental tenet remains the same: Nobody is being left behind.

Yours sincerely,

Olli Sima

Executive City Councillor for Innovation, Urban Planning and Mobility Ulli Sima

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Editorial

Embracing innovative and forward-looking solutions has made Vienna the city with the highest quality of living worldwide. Vienna benefits both from its historical heritage and from ongoing investments in public infrastructure that provide citizens with everything they need to make their lives easier: affordable housing, clean and well-cared-for public spaces and playgrounds in walking distance, culture, sports and other leisure time offers, childcare facilities with extensive opening hours, well-functioning and affordable public transport, support services for all life situations, a prospering economy and good jobs, excellent spring water transported into the city from the Alps – all of this as good as standard features of life in Vienna.

However, resting on one's laurels has never been an option. In the past, too, Vienna had to keep on evolving and moving forward, otherwise it would not have achieved the excellent quality of living that we are proud of today and that has repeatedly won the city awards. In all of this, the primary benchmark has been the people living here – they always come first.

The challenges we are facing today – climate crisis, urbanisation, digitalisation – require Vienna to step up the pace of development. The Smart Climate City Strategy Vienna sets out the guidelines in this context.

The Digital Agenda of the City of Vienna relies to a large extent on the Smart Climate City Strategy for guidance, deriving actionable measures from it, as digitalisation is not an end in itself. The Digital Agenda fleshes out these guidelines with respect to digitalisation. Ultimately, the aim is to map Vienna's legendary quality of living onto the digital space as well.

Digital humanism – guidance for digitalisation

Technologies are not neutral, they tend to have a structuring effect. They are influenced by the people who design them, reflecting their values, standards, economic interests and what they think our society is, or should be, like.

When it comes to managing digitalisation in Vienna, we follow the path of digital humanism. As set out in the "Vienna Manifesto on Digital Humanism" of 2019, we want to "shape technologies in accordance with human values and needs, instead of allowing technologies to shape humans." We want to make people and their well-being, including all of their social and societal needs, the primary focus of developments. Digital technologies must improve the lives of the people living in Vienna, by offering tangible benefits, such as making it easier to file applications, by improving interactions with the municipal administration, and by reusing previously collected information to automate the processing of requests.

Smart Climate City Vienna goes digital

Transforming Vienna into a climate-neutral city by 2040 is the key challenge we are faced with. This is why digitalisation also needs to contribute to climate action, to environmental sustainability and to conserving resources in administrative practice. Digitalisation can help reduce in-person interactions and ensure a more efficient use of resources (circular economy, metering, etc.). To achieve this, we have to use digital infrastructures and equipment sustainably: IT infrastructures must not only run on renewable energy, but also be sustainably produced and disposed of.

A key aspect in this context is upgrading Vienna's energy infrastructure. Digital technologies are pivotal when it comes to leveraging the full potential of renewable energy sources and achieving maximum efficiency at the same time. Digitalising the city's energy infrastructure allows citizens to become pro-active consumers or even prosumers. This will not only lead to increased acceptance for renewable energies among the population but also help keep the energy system stable and sustainable.

Start of the digital era – rolling out digitalisation on a broad scale

Demand for digital services, as well as acceptance of such services among the population, is on the rise. At first glance, digitalisation seems to be as good as complete in many areas of life. In reality, however, we are only just starting out with a broad-based digital transformation that will continue to present us with major challenges for decades to come. The emergence of artificial intelligence (AI) is a case in point. Our efforts are geared towards Vienna's people and Vienna's businesses, in a bid to generate the greatest possible benefit for them and provide them with reliable digital services. To this end, we will work to expand digital infrastructures on a broad scale, further standardising the technologies being used today and going forward, and also embracing new technologies such as artificial intelligence. Putting people's needs first while achieving standardisation and modernisation is our key mission for the next few years. As in other areas, we will continue to co-operate with our municipal partner enterprises Wiener Stadtwerke and Wien Holding in this context.

1. More digital services for citizens

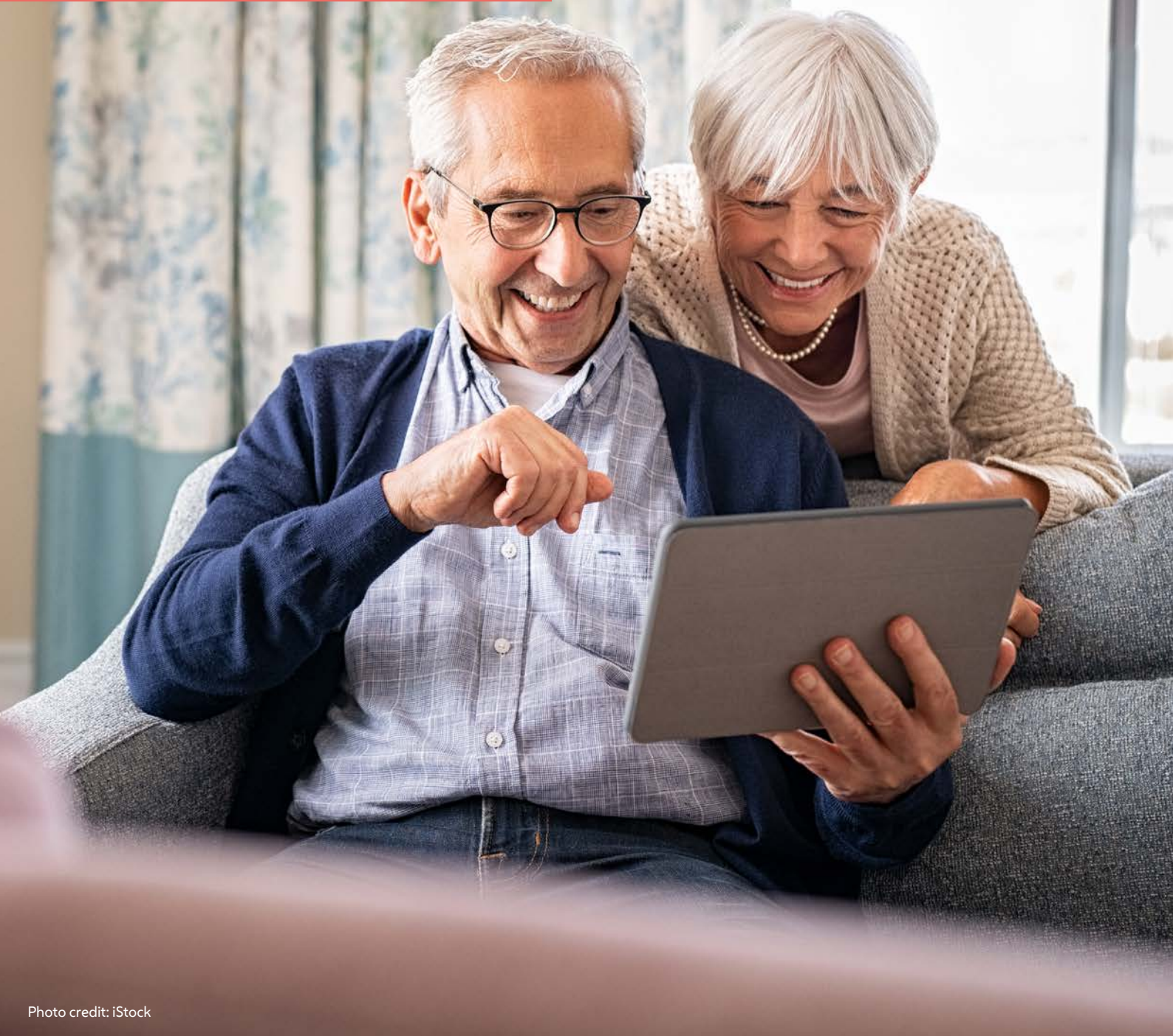


Photo credit: iStock

The number of digital services being delivered by the Vienna City Administration keeps growing – all the more reason to take our digital offers for citizens and businesses to a new level by 2030.



We will standardise and simplify access to our digital services and personalise our offers, in particular when it comes to digital public services and healthcare services. We will design our digital services to better meet citizens' individual needs and preferences, introducing a greater level of flexibility into everyday life in the city. At the same time, municipal and administrative information, cyber security and climate issues will be priority areas where we will be taking more and more information and services digital. Another key rule is for municipal administration services to be designed in such a way that they can be used by everyone – online or offline.

This is our way to give back to people: helping them save time otherwise spent on in-person interactions with public authorities and providing them with faster access to the information they need.

What it's all about

TRANSACTIONING BUSINESS WITH PUBLIC AUTHORITIES WILL BECOME EASIER AND GO DIGITAL – NO MORE NEED FOR IN-PERSON INTERACTION

Digital Vienna and the services it delivers are at the citizens' beck and call – no matter when or where. Personalised information, easy-to-use services, proactive contacting, single input of information and pooling of contacts with municipal administration units on the mein.wien platform and in the Stadt Wien help users save time and improve the quality of their lives.

Best Practice

Our goal in municipal administration is to offer personalised services to the citizens of Vienna, not just at our office premises but also through our digital channels. This is why we have come up with the Stadt Wien Konto¹, the City of Vienna account, which gives citizens digital access to our services. A single sign-on – like the ones we are all familiar with from various internet service providers – is all it takes to get access to the city's services. About half a million people have opted for such an account so far and are now also able to easily use other offers such as our participation platform at mitgestalten.wien.gv.at.

The Stadt Wien app brings a variety of personalised interactions with public authorities “onto your phone”, enabling you to conveniently use already available digital public services at any time and from anywhere.

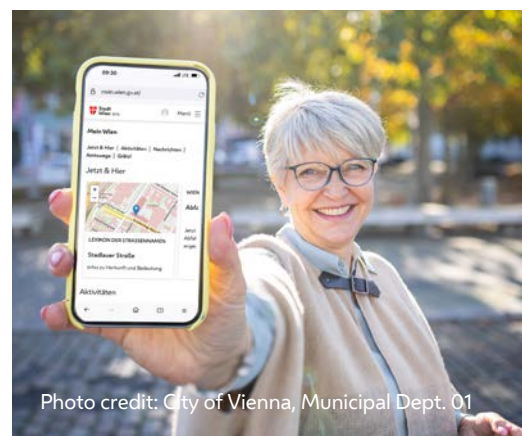


Photo credit: City of Vienna, Municipal Dept. 01

The Stadt Wien account and the Stadt Wien app offer digital services for citizens.

¹ konto.wien.gv.at



Photo credit: iStock

Going digital helps us improve both quality and effectiveness in preventive medicine, patient-centred health care, as well as home and nursing care.

WE ARE GETTING READY TO OFFER ALL CITIZENS DIGITAL ACCESS TO COMPREHENSIVE AND QUALITY HEALTH CARE SERVICES

Digitalisation comes with valuable opportunities – optimising processes and treatments, rapidly sharing and automatically evaluating health data, and promptly transferring and accessing information. Going digital helps us improve both quality and effectiveness in preventive medicine, patient-centred health care, as well as home and nursing care.

Best Practice

Digital channels can make it easier to make health information available and accessible to citizens and to document the health services being provided. A range of such digital health services is already available, making appointments online being just one example.

What we are planning

WE WILL RAMP UP DIGITAL OFFERS

- 1.** Digital offers must be easy to use, accessible and readily available. The personalised services available on [mein.wien](#) will be continuously expanded and made more user-friendly. We will define new quality measures in 2024 to ensure user-friendly and target-group-aligned design for digital services (UI/UX Design²). To this end, we will make dedicated resources available to Municipal Department 01, the City of Vienna's IT Department. To ensure a focus on user orientation, application usability will be subject to regular reviews.
- 2.** Every year, at least three new services that are currently used by more than 1,000 persons per year will be made available on [mein.wien](#). The life situation approach (birth of a child, moving house, etc.) will come into play as well: Which steps, which data and which interactions with public authorities are needed when you move house or when you are having a baby? Voluntary personalisation and notification options will make it possible to tailor services to citizens' needs and preferences ("Your resident's parking permit is about to expire, do you want to renew it?").
- 3.** We will work to expand gigabit connectivity, aiming to raise the number of fibre-optic connections in private homes, hospitals and educational institutions. In this context, a special focus will be placed on housing construction and renovation, as well as on synergies achievable through infrastructure development, for example under the city's heat and cooling strategy. A project for this purpose was launched in 2023.

² User Interface Design und User Experience Design.

4. We will make mobility go digital, ramping up ride-share offers (car and bike sharing) and piloting new on-demand services to ensure full mobility throughout the whole of Vienna without the need to own a car.

5. We will keep raising the number of smart traffic lights in a bid to prioritise ecologically friendly modes of transport (public transport, bikes, walking).

Best Practice:

Green light for pedestrians: Smart traffic lights detect when people in the vicinity want to cross and then turn green at exactly the right moment. What is more, they can also detect people using wheelchairs, walking aids or baby strollers, automatically extending the green phase to enable safe crossings.

WE WILL CREATE NEW DIGITAL PUBLIC SERVICES

6. By 2027, the City of Vienna, Wiener Stadtwerke and Wien Holding will create a standardised and trusted sign-on ensuring easy, secure and trusted access to the online services offered by the city and the companies operated by it.

7. “Zahl’s Wien” is an integrated payment service to be developed specifically for services provided by the City of Vienna. Starting in 2025, it will become available in stages, expanding the range of online payment methods available.

8. Online booking is an option that many citizens regularly use to buy tickets for municipal services and facilities, for instance swimming pools, conveniently from home. Not only will more such online services be made available, they will become easier to use as well.

9. We encourage citizens to rely on electronic services to conduct official business, such as using the ID Austria scheme when filing applications and requests, and offer them support in doing so, for instance by providing registration services at City Hall. Claiming a reduction in official duties and charges under the corresponding legislation is just one out of many applications people will find easier to complete electronically.

10. Together with the federal administration and other local authorities we are working to link up our service portals so that citizens can effortlessly access the services or procedures they want no matter where they started from. Switching between various service portals is to become seamless, with no more need to enter new credentials on each such portal. To achieve this, we will make a centralised identity management system based on state-of-the-art standards such as OpenID Connect available from 2027 to both safeguard our applications and provide citizens with easy digital access.



WE WILL PROVIDE A CENTRAL DIGITAL POINT OF CONTACT FOR CITIZENS

11. mein.wien and the Stadt Wien app will serve as central and personalised digital points of contact for the City of Vienna – no matter what terminal device is being used. What they should deliver:

- speed up and simplify interactions with public authorities,
- help users keep on top of things – for example appointments with the municipal administration,
- collate and actively share information,
- keep users up-to-date on what is going on in their neighbourhoods,
- encourage participation processes,
- be easy to use and available to everybody living in Vienna.

Best Practice

Digitalisation is the way to go if the goal is efficient and state-of-the-art municipal administration. Services become more easily accessible, citizens save time in their interactions, and processing becomes more efficient. Digital administrative services such as the Sag's Wien app or the WienBot are prime examples of how we envisage digital administration to work: end-to-end digital communications, from first contact to final completion. No more forms to print out, no more switching between phone, email or online forms.

These services are proof that we have made good on our promise to offer people easier and more transparent interactions with our digital administration.

12. Citizens will be able to access a dedicated health section via a central digital portal. Step by step, we will be offering the following services:

- making appointments
- registering for City of Vienna vaccination campaigns
- digital preventive health programmes
- telemedicine services
- quality-assured health information

A WIDER RANGE OF INFORMATION MADE AVAILABLE TO CITIZENS

13. Vienna has been elected European Capital of Democracy 2024/25 – a major honour that also entails special commitments. All the people living in Vienna are to be enabled to have an active say on what goes on in the city in various contexts – and digital tools are the way to make this happen. Participation options such as votes and surveys in plain and intelligible language will be made available in particular to children and young people living in Vienna.

Best Practice

It is a top priority for us in Vienna to enable citizens to put their stamp on the city in a variety of ways. Digital channels offer a range of new forms of participation, which we plan to continue to rely on, provide and expand over the next few years.

The website "mitgestalten.wien.gv.at" is an easily accessible and simple way for citizens to engage in local activities: from having a say in neighbourhood and street design, such as in the refurbishing of Gumpendorfer Straße and outer Mariahilfer Straße, to submitting ideas for fighting climate change as a part of the Vienna Climate Team.

Where we need support

Participation hinges on people joining in. It is the ideas and suggestions of Vienna's citizens that count. Everyone is invited to make an active contribution on "mitgestalten.wien.gv.at": Posting ideas, commenting on somebody else's suggestions or taking part in a survey – there is something in it for everyone.



14. We are creating digital information and participation formats to inform citizens and businesses about the transformation needed to make Vienna climate-neutral by 2040, and encourage their active participation, for example in one of the Vienna Climate Teams on mitgestalten.wien.gv.at. A special focus in this context is on addressing and mitigating rebound effects³.

15. Help in cases of cybercrime: Violence and hatred on the internet are widespread and make peaceful coexistence within a city all the more difficult. Our top priority here is to raise awareness and help victims. The City of Vienna keeps expanding the support it offers to victims of cyber violence: the Cybercrime Helpline and the Competence Centre for the Fight against Cyber Violence are but two examples.

Best Practice

While digitalisation comes with many benefits for our daily lives, it has negative impacts, too, such as the increase in internet crime. Digital offences such as online fraud, fraudulent use of data, phishing attacks, cyber bullying or online stalking are on the rise. The City of Vienna has taken steps against this development. We have found that many of those affected do not know where to turn. This is why we have set up the City of Vienna Cybercrime Helpline, which offers prompt support without any red tape.

Trained staff can be reached through the number 01 4000-4006 on workdays from 7:30 to 17:00 h.



Photo credit: City of Vienna/Christian Fürthner

The Cybercrime Helpline is available to victims of internet crime.

³ A rebound effect is a situation where an increase in efficiency in technology use does not result in a reduction of overall use but in increased use due to behavioural changes.

16. We observe the highest standards of transparency when it comes to securely storing, collecting and erasing data on behalf of citizens. A self-service option for citizens is in the pipeline and will be presented in 2026. People will be able to verify at any time which personal data were used by whom and in which context.

17. The City of Vienna provides support for using digital services, ensuring that all citizens can benefit from them and preventing a digital divide from forming. In 2025, we will start setting up points of contact that offer such support. What is more, we pay strict attention to making our digital offers accessible. Everything the City of Vienna publishes on the internet meets the web accessibility guidelines published on wien.gv.at.

18. We plan to rely more and more on the digital service of documents to private individuals and businesses and will integrate the corresponding features in mein.wien. We started implementing targeted measures in 2023 and are going to raise the share of digitally delivered mail from currently 13 per cent to 20 per cent by 2030. Communications without having to switch between different media save time and money and help reduce greenhouse gas emissions.

DIGITALISATION OF TREATMENT PATHS IN HEALTH CARE AND NURSING CARE

We are implementing digitalisation in the health care and nursing care sectors along the entire treatment path to achieve a full-scale effect. The digital services offered by the Vienna health care and nursing care system will be further expanded by 2030.



Where we need support

To digitalise health care and nursing care it is necessary for a variety of individuals, groups and institutions to work together. What is needed is investment in research and development, innovations tailored to citizen needs, and a rapid transition of proof-of-concept projects into regular operation in the health care and nursing care sectors. For this reason, we intend to continue and expand our cooperative efforts in this field.

19. We support the integrated care approach⁴ for those suffering from chronic illnesses: To achieve this, we need a digital health platform operated by the City of Vienna to provide digital documentation and digital process support that is patient-centred, end-to-end, cross-sectoral and interdisciplinary. An initial pilot project will involve further developing the SmartCOPDTrainer for the monitoring of COPD (chronic obstructive pulmonary disease) and integrating it into the platform.

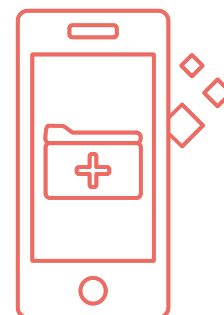
⁴ "Integrated care" means the seamless linking of a variety of medical services and treatments to ensure continuous and efficient care for patients.

What is more, we are working to develop digital programmes for the prevention of lifestyle diseases (such as obesity, cardiovascular problems, high blood pressure, etc.) to encourage people to seek help early on and to draw attention to risks of future health problems.

Best Practice

Telemedicine solutions help improve quality of life, also of those suffering from illness. Such services make it possible to get medical help anytime and anywhere, also over greater distances. A case in point is the SmartCOPDTrainer, a tool developed in Vienna for future use in the city's health services. It is intended to help patients cope with COPD, a progressive and as yet incurable lung disease. The key purposes of the application are to improve quality of life, encourage early detection and prevent a significant progression of symptom

In 2024, we are launching a pilot project at a hospital run by the Vienna Hospital Association to verify whether and how such telemedicine solutions can provide useful support in outpatient treatment and care. Telemedical consultations are being continually added to the services available under the 1450 Health Helpline (teleweb).



IN-HOUSE DIGITALISATION IS A KEY PREREQUISITE

To be able to deliver good digital services to the outside world, an organisation needs to have mastered digitalisation in-house first. Only then will it be able to offer digital processes at all and to keep improving the efficiency of its administrative work.

Hospitals and care facilities are centred entirely around treating people, and organisational processes have developed over decades. Using digital technologies can help reduce administrative effort.

20. We will optimise and provide support for cross-sectional administrative processes, involving hospitals, care facilities, counselling and day-care centres as well as mobile care services.

- Administrative processes, such as making appointments or transferring documents, will be digitally mapped by 2030, freeing up time and resources so our medical and nursing staff can attend to people, which is their core skill set.
- We will make health-related data available to authorised health service providers, to groups of persons working in health care and nursing care, as well as to private citizens. In doing so, we will rely on the technical standards and guidelines relevant in the field of medicine.
- We will upgrade hospital information systems by 2030, significantly contributing to improving both clinical and administrative processes.

2. More digital knowledge for Vienna: from schools to the workplace to research



Photo credit: City of Vienna, Municipal Dept. 01

We will ramp up our education-related information and service offers.

Building up skills and providing education and training will help us engage the citizens of Vienna in the digital transformation and further strengthen Vienna's appeal.

The City of Vienna has taken far-reaching measures to strengthen digital education, including making improvements to infrastructure and providing support to both teachers and parents. The Digital Education Strategy remains focused on fostering the digital skills of children and young people. Vienna encourages and promotes life-long learning and the acquiring of digital skills no matter how old people are or what jobs they hold.

In academic research, digitalisation and the use of AI as a tool are taking on a more and more prominent role. In an effort to actively influence and manage digital developments, the City of Vienna relies on the expertise of the local scientific community for support.

What it's all about

Digital infrastructure, above all in schools and kindergartens: The City of Vienna is responsible for providing the necessary infrastructure and equipment to municipal elementary schools, lower-secondary schools, special-needs schools, vocational orientation schools, vocational schools and technical colleges while also funding and operating municipal kindergartens. Ramping up the infrastructure (for example, broadband internet), making devices and materials available to teachers, and developing extra digital education programmes have been important steps along the way. To allow teachers to focus on their core task of conveying knowledge and values, we are going to provide support to them when it comes to administrative tasks and digital communications with parents.

Best Practice

Digital education should start as early as possible – so kindergarten is the natural starting point. To be able to learn, and teach, digital skills, you need up-to-date equipment and a good infrastructure in place in educational institutions, and we want to make this available to our children and young people early on and in a way that is appropriate for their respective ages. In 2019, the City of Vienna partnered up with Wiener Stadtwerke to start providing lower-secondary schools, vocational orientation schools and vocational schools with WIFI and upgraded network cabling. In 2021, special-needs schools were added to the list. As of autumn 2023, a total of 193 schools had been provided with the digital infrastructure they need to be fit for the future. Vienna's elementary schools are next on the agenda for a digital upgrade, with another 143 school locations to be covered by 2027. In addition, 391 municipal kindergartens had been supplied with broadband by the end of 2023.



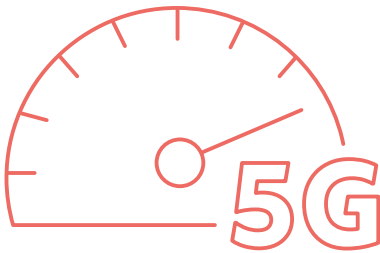
With its focus on schools catering to students of compulsory school age and on early childhood education facilities, Vienna's Digital Education Strategy provides guidance on how to create an environment where children and young people can learn how to use digital media responsibly and how to build and develop the life skills they need in the age of digitalisation.

Lifelong learning both for the workplace and for life in general: Being able to master digital technologies has become an indispensable skill today, in all areas of life and for all age groups. Vienna wants to make sure that everybody can acquire such basic digital skills. A number of stakeholders are involved in designing, providing and further developing programmes for digital education.

Academia and research: Digitalisation and AI-assisted research are taking centre stage today. The funding programmes managed by the Vienna Science and Technology Fund (Wiener Wissenschafts- und Technologiefonds, WWTF) have long paid heed to this development by increasingly focusing on information technology subjects. We need this scientific expertise to be able to understand the extraordinary developments we are faced with and address them proactively in a way that takes the needs of Vienna's citizens into account.

What we are planning

MORE DIGITAL INFRASTRUCTURE FOR SCHOOLS AND KINDERGARTENS



21. We will move ahead with expanding our digital infrastructure. By 2024, all municipal kindergartens will have broadband access and WIFI.

22. Elementary schools run by the City of Vienna will receive wireless internet access for teaching and administration purposes by 2028.

23. A large number of Viennese pupils and students of compulsory school age already have notebooks and tablets at their disposal that were provided or partly funded by the City of Vienna. We plan to expand this scheme and develop appropriate programmes to make devices available also in other educational institutions.

24. Starting in 2023, we have been supplying our schools with digital devices for teachers, a drive we are continuing on an ongoing basis. Teaching requirements are being evaluated alongside to ensure targeted continued development in this context. Technical optimisation measures ensure that student and teacher devices interact smoothly with presentation media (video projectors, digital whiteboards).

25. We will improve the ways educational institutions communicate digitally with parents and students. By 2025, we will introduce digital tools for schools and kindergartens to reduce time and effort for administrators, parents and teachers, for example a digital teacher-parent communication log (Mitteilungsheft) or digital school enrolment.

26. In 2025, we will pilot the use of IoT (Internet of Things) in kindergartens to control room temperatures. The sensor technology used for this purpose is to also serve as a practical example to raise the children's awareness of and understanding for technology.

DIGITAL SKILLS FOR EVERYONE IN VIENNA

27. The Vienna Digital Skills Initiative (Digitale Kompetenzoffensive) is aimed at helping everyone in Vienna to develop digital skills. Digital skill targets have been defined for all age groups, from early childhood to adult education, with a special focus on the guiding principles of digital humanism. Starting in 2024, educational institutions in Vienna have been able to offer easy-access digitalisation workshops under the heading of Digital Everywhere (Digital Überall).

28. The Vienna Employment Promotion Fund (Wiener Arbeitnehmer*innenförderungsfonds, waff) has various programmes on offer to help workers acquire and improve digital skills for the workplace, including information on continued professional development, counselling on career development opportunities, and financial support for education and training activities. In the extensive database available on the waff website, people can look for appropriate courses, such as software development, multimedia and web design, ECDL, etc. Applications for financial support can likewise be filed online.

29. We will establish a transparent certification system for digital skill building to make digital skills measurable and comparable. Being able to provide certifications is a key factor in further career steps both in school and in the workplace.

30. We will provide targeted support for teachers and health and nursing care workers to develop digital skills and for education and training curricula to be further developed. To this end, we will consult with the relevant institutions operating in Vienna, develop appropriate measures ourselves, where necessary (for instance within the scope of the DigitalCity.Wien programme) or provide support for partner offers, such as those available from Wiener Bildungsserver, a not-for-profit association funded by the City of Vienna to help children and young people build media skills.

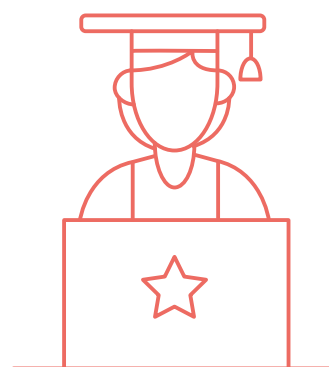
31. Trained Digital Officers have been assigned in all municipal departments and will be offered a wide range of continued professional development options as from 2024.

32. The Vienna Research Festival as well as workshops hosted by the Vienna Business Agency provide young people with opportunities to learn more about digital solutions being developed in Vienna. At the same time, they can find out more about new job profiles having emerged in the wake of ongoing digitalisation and can obtain more information about education options and career paths in IT.

33. A project on career orientation in Vienna places a strong focus on STEM subjects, seeking to find out how more people, and especially more women and girls, can be enticed to pursue qualifications and careers in these fields. The aim is to provide the best possible support in finding a STEM-related career path. Currently, efforts are under way to raise the percentage of girls attending technical colleges.

DIGITAL EXPERTS FOR VIENNA

34. A special focus is placed on fostering female talent in IT, for example with the City of Vienna's Hedy Lamarr Award or the She.Digital initiative launched by DigitalCity.Wien. We are planning to step up our collaboration with businesses and relevant programmes (GROW F, AplusB Scale up, Female Factor, Women in ICT). Ongoing efforts to bring these initiatives together to form a high-impact format (Round Table) will be continued together with the stakeholders of the Vienna Economic Council.





Every year, the City of Vienna's Hedy Lamarr Award is presented to a female researcher in Austria for outstanding work in information technology.

Best Practices

IT continues to be a male-dominated sector. We want to help set the balance straight by not only raising girls' interest in digitalisation and technology at an early age but also awareness for this issue among the teaching profession. We put the spotlight on female role models and have female IT and digitalisation experts from government bodies and from businesses give talks in Viennese schools.

Another step was to establish the City of Vienna's annual Hedy Lamarr Award, which is presented to female researchers in Austria for outstanding work in information technology. The winners, who each receive EUR 10,000, are to serve as role models for the next generation and encourage young women to pursue a career in IT.

35. We advocate activities aimed at raising the number of women working in IT. Girls, in particular, are to be encouraged to become involved in STEM/IT activities and digitalisation as early as possible. The Digital Girls Hackathon organised by DigitalCity.Wien is going to be further expanded, and other formats, such as programming competitions, will be used to highlight educational pathways into engineering and technology early on.

36. In cooperation with Vienna-based businesses, the Vienna Business Agency presents the futureEDUCATION Award to teachers-in-training whose theses address the issue of how to make STEM topics appealing to children. A women's bonus is awarded for the participation of women in digitalisation projects by the Vienna Business Agency and the Vienna-based high-tech incubator IniTS.

37. The Qualification Plan Vienna 2030 sets out a qualification strategy for Vienna. The skilled labour centre established at the Vienna Employment Promotion Fund (waff) is a strategic instrument for analysing labour demand in Vienna. Given current demand for about 6,000 IT specialists in Vienna, it is all the more important to ensure that effective education and training offers are available to promote education and career paths in IT.

Best Practice

Digitalisation changes the way we work and comes with both opportunities and challenges. The City of Vienna considers it important to foster digitalisation-related vocational education and training for the citizens of Vienna. We provide financial support for educational measures to help people get digitally fit for a successful future, improving their career prospects in a digital world, helping them stay abreast of developments in the workplace and safeguarding their jobs.

Digitalisation-related continued professional development may be eligible for funding of up to EUR 5,000. An example: The waff programme FRECH (Women Seize Opportunities) provides additional services and funding geared specifically to women who plan to change careers or upgrade their skill sets in a digitalisation context.

DIGITAL SCIENCE, INNOVATION AND RESEARCH TO RAISE VIENNA'S APPEAL

38. We are driving strategic research in digitalisation, for example within the scope of the COMET centre programme, where artificial intelligence, visual computing, automation, security and safety, additive manufacturing and modelling are among the high-priority areas designated for business grants.

39. The DigitalCity.Wien initiative, a format designed for the city administration, businesses and academia to join forces, was set up ten years ago. Newly developed aspects include the hosting of annual Digital Days as a single point of contact for Vienna's digitalisation community.

40. We are intensifying efforts to promote the services we offer for international top talent and want to provide the best possible support to international experts from the digital economy. The Vienna Business Agency has a Business Immigration Office in place to provide advice on questions relating to residence requirements and employment. The WWTF Dual Career Centre helps partners in dual career couples find employment in science and research.

41. We provide support to innovation labs that coach businesses on their individual journeys towards digitalisation, helping them safeguard and strengthen their competitiveness. GeoSpaceHub, a geodata and satellite data innovation lab, is a project scheduled to run until 2028.

42. The City of Vienna and the WWTF offer support to young scientists within the scope of digital humanism. A Digital Humanism doctoral programme, scheduled to be launched in the autumn of 2024, will provide a setting for interdisciplinary research, complementary education and an ongoing exchange between students from computer science and students from the humanities, social sciences and cultural studies.

43. We use the platform for degree theses, which was set up under the higher education cooperation agreement entered into between the City of Vienna and academic institutions in Vienna, to launch calls for theses in specific subjects and offer sponsoring and support, which allows the city administration to benefit from student knowledge.

44. The WWTF issues specifically tailored calls to encourage the development of theories, solution approaches and tools for digitalisation in the fields of artificial intelligence and digital humanism that are specific to Vienna. Every third euro spent by the WWTF in the past decade went into cutting-edge AI research in Vienna, and figures are increasing rapidly. In 2023, investments came to a total of more than EUR 10 million. The long-term goal is to introduce AI/ML⁵ in all scientific fields, from AI for Health to AI for Industry to AI for Democracy. The Vienna Research Groups for Young Investigators, set up in 2010, is a programme designed to bring top talent from all over the world to Vienna, with up to three outstanding young researchers joining the ranks of Vienna's research community every year. The programme will be continued over the next few years and expanded if possible.



Photo credit: DigitalCity.Wien/ Clemens Schmiedbauer

Annually held Digital Days offer exciting workshops and lots of digital interaction.

⁵ Artificial Intelligence/Machine Learning..

3. Clear rules for digitalisation in Vienna – good governance and social responsibility



Photo credit: iStock

The City of Vienna embraces the use of new technologies.

While technological progress is a driver of wealth, it has a flip side, too, unless it is centred around people. This is why we have laid down clear rules when it comes to using new technologies: What are the conditions for using artificial intelligence, what are the rules for renting a scooter or for platform-based short-term apartment rentals?

Economic and labour policy is based on the strategy “Vienna 2030 – Economy and Innovation”. Digitalisation, Vienna-style, is one of six thematic areas already incorporated in this strategy.



What it's all about

ACTIVE DIGITAL POLICY MEASURES

New digital services and products change the way we live together in urban areas, impacting both physical and digital spaces and making them become more and more intertwined. This applies to short-term apartment rentals to tourists, which go hand in hand with a decline in available housing, to innovations in mobility, such as e-scooters and other sharing or transport models, and last, but not least, to the way we work – think mobile working. Add to this mix the frequently quoted problems of hate on the internet, filter bubbles and the rise in antidemocratic tendencies.

Nobody wants to miss out on the opportunities afforded by digital technologies – after all, they offer us alternatives and choices in many areas. However, their impacts are not always entirely beneficial and affect different groups of society in different ways. Neither is access to digital services equally distributed throughout our society. This is where digital policy action comes into play – we want to see Vienna's outstanding quality of living mapped in the digital world, always guided by the principles of digital humanism.

REGULATORY AND LEGAL REQUIREMENTS

The digital space is not a legal vacuum. The principle that technology has to serve people is inextricably linked with the respect and enforcement of the rules and requirements we have set ourselves as a society to ensure that we all can live together in harmony.

Over the past few years, the European Union has put increased efforts into regulating the digital market, with the City of Vienna providing important suggestions in this context. Key EU legal frameworks such as the Digital Services Act, the Digital Markets Act, the AI Act, the Data Governance Act or the NIS2 Directive have laid the regulatory groundwork, which now needs to be implemented in practice.

What we are planning

TRUST WITHIN THE DIGITAL SPACE

45. Digital policymaking thrives on an exchange of ideas between academia, business, the social partners, art and culture and the many citizens' initiatives representing the interests of the people. The Digital Days, the digital monthly round tables and other DigitalCity.Wien formats show that the City of Vienna has already embraced this kind of discourse and will create new formats as necessary to encourage it.



Photo credit: Albin Melez, DigitalCity.Wien

Digital Days 2022

Best Practice

Digital humanism is the guiding principle underpinning our approach in the face of ever-growing digitalisation: We want to make people and their well-being, including all of their social and societal needs, the primary focus of developments.

Through their activities and initiatives, a range of different institutions, groups and actors contribute to spreading the ideas of digital humanism in Vienna. However, digital humanism is much more than just a philosophical concept: Targeted project calls issued by the WWTF and the Vienna Business Agency encourage both academia and businesses to implement approaches based on digital humanism in practice. Conferences such as the annual Digital Days, as well as the Vienna Manifesto on Digital Humanism, promote an ongoing discourse and sharing of ideas. Vienna is proud to be one of the leading cities in Europe to embrace this humanist approach to digitalisation.

46. To a large extent, digital policy measures need to be implemented on a supranational level, especially within the European Union. For this reason, we also turn to umbrella organisations and federations, such as the Austrian Association of Towns and Cities, EUROCITIES and the Cities Coalition for Digital Rights, to represent Vienna's interests. Vienna was one of the stakeholders that initiated serious debate at EU level on the issue of short-term rental platforms. In Austria, the most recently published EU regulation in this field⁶ will have to be implemented in a joint effort by the federal and regional government levels. Vienna will pay particular attention to providing a solution that involves as little red tape as possible and is aligned with our existing IT landscape.

⁶ Regulation (EU) 2024/1028 of the European Parliament and of the Council of 11 April 2024 on data collection and sharing relating to short-term accommodation rental services and amending Regulation (EU) 2018/1724.

Best Practice

As a city, we are taking active steps within our remit to manage digitalisation, with the interests of the people of Vienna in mind. We are aware, however, that some digital developments can be managed only based on commitment and cooperation at national and international level.

It is for this very reason that Vienna accepted a position on the Leadership Board of the Cities Coalition for Digital Rights (CC4DR), an international network of cities helping one another to build capacities to strengthen citizens' digital rights. Together with the City of Dublin, we have taken the lead on a key project – building a digital academy that will provide cities all over the world with pointers and specific action items for protecting human rights in the digital age.

CLEAR RULES FOR LIVING TOGETHER IN A DIGITAL CITY

47. Vienna's high quality of living calls for clear rules governing how people should live together, and that applies in the digital space as well. We will therefore continue to enforce legal requirements, contribute to the development of EU regulatory instruments and come up with local rules and regulations for Vienna where necessary.

Best Practice

The City of Vienna was quick to realise that it had to take action – within its remit – to rein in some digitalisation-related developments, especially where these have negative impacts on the city, its economy or its citizens. This is why we started early on to consistently implement and enforce rights in the digital space. Here are a few examples:

Renting out apartments to tourists, with the support of online platforms, reduces the amount of housing available to people actually living in Vienna. For this reason, the City of Vienna has set clear rules in this area, which are being strictly enforced. Council flats, for example, cannot be rented out, and all other rentals are subject to mandatory local tourism tax.

The use of rental bikes, to start with, and then e-scooters for hire has given rise to major challenges in a number of cities. Vienna has come up with a clear set of rules for where scooters can be parked and relies on technical means to enforce them. Rental e-scooters must be parked primarily in specifically designated parking bays, and people can use the Sag's Wien app to report illegally parked scooters.



Photo credit: PID/Christian Fürthner

Rental e-scooters must be parked primarily in specifically designated parking bays, and people can use the Sag's Wien app to report illegally parked scooters.

WE ARE TAKING DIGITAL DATA LIVE

48. The City of Vienna applies the fundamental rules of value-based engineering in its administrative operations. With funding from the city's innovation budget, two pilot projects for upgrading mein.wien will be launched in 2024.

49. We provide training to City of Vienna staff. We are open to in-house developments and to obtaining relevant accreditation and certification. By 2030, we intend to have obtained certification under the standard IEEE 7000 (or a corresponding standard) on addressing ethical concerns related to AI.

50. We want to leverage the technological opportunities afforded by AI while respecting both digital humanism and the regulatory frameworks in place in Vienna. The City of Vienna's AI Strategy and the Compass for the use of generative artificial intelligence in a work-related context serve as guidance in this respect. We will revise the Vienna AI Strategy in 2024 and set up a public online AI register that documents the use of AI in the city. In addition, we are working with a group of experts to develop a governance policy on the approval of AI use.

51. In consultation with the City of Vienna's CIO, the Vienna Business Agency, the waff, Wiener Stadtwerke and the WWTF have launched what is referred to as the AI Initiative of the City of Vienna in a bid to work closer together, leverage synergies and raise additional funding to strengthen Vienna's position as a prime location in the field of artificial intelligence. All the organisations involved regard implementing AI activities as a crucial part of their strategies for the near future.



4. Digitalisation needs infrastructure that is fit for the future

Photo credit: City of Vienna,
Municipal Dept. 01

We will keep expanding our digital infrastructure, relying on open standards and state-of-the-art IT architectures.



To do so, we will develop and upgrade our digital infrastructure to meet the growing demand for IT services in Vienna and to make it easier for citizens to use our services. In addition, we will rely on digital technologies to reach the city's climate goals by conserving resources and increasing efficiency.

Data help us to better understand and plan for our city and make it smarter – this requires transparency and a conscientious approach. By 2030, we will be providing access to a wealth of valuable data held by the city. An open data ecosystem that allows for trusted use of data and ensures protection for critical infrastructures is at the top of our agenda.

What it's all about

A PROACTIVE AND CONSCIENTIOUS APPROACH TO DEVELOPING DIGITAL INFRASTRUCTURES AND ARCHITECTURES

Keeping up with the ever growing demand for the City of Vienna's IT services requires adequate infrastructures. We will rely on standardisation to be able to scale the technologies we use and to roll them out on a broad basis. We will upgrade existing infrastructures to be able to put new technologies to use for the benefit of Vienna's citizens. And we will centre our efforts around people to make it easy and simple for them to use our services.

Digitalisation is instrumental in reaching our climate goals. Digital tools can help protect the climate and ensure environmental sustainability, in alignment with the city's climate goals – climate action, adaptation to climate change, and circular economy.

We rely on digital technology to conserve resources and increase efficiency, for example to minimise the use of materials in new builds, be it individual buildings or entire urban quarters, to detect infrastructure damage as early as possible, or to reduce in-person interaction with the administration (digital service of documents, video conferencing, digital applications, etc.).

OPEN DATA ECOSYSTEM

How to handle data is one of the key challenges when it comes to digitalisation: Which information can be extracted from which data? Who is responsible for the data? Where are the data being stored?

This is why we have developed the Data Excellence Strategy⁷, which lays out the principles of efficient data management (for instance with respect to geodata, open data and data governance) and trusted data use. Protecting critical infrastructure data and maintaining supply security is at the top of our agenda.

⁷ <https://go.gv.at/l9dxstrategieen>

When it comes to creating a data ecosystem, we follow the FAIR (Findable, Accessible, Interoperable and Reusable) data principle. Open by Default has been our guiding principle for years, and Open by Design applies to all the Open Government Data (OGD) we publish: all data that are not personal or subject to specific protection are made available publicly and free of charge. The City does not only make basic geodata for the entire territory of Vienna available as OGD but also oblique aerial photography and vehicle-based mobile mapping data ("Kappazunder" database). Statistics and real-time data are provided as well. More than 330 applications have already been developed based on open data supplied by the City of Vienna.

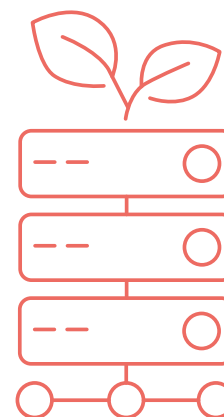
What we are planning

EXPANSION OF DIGITAL INFRASTRUCTURE AND ARCHITECTURE

52. We plan and organise our IT landscape (hardware and software) in such a way that energy and resource consumption is kept as low as possible. This also includes operating green and climate-friendly data centres.

Best Practice

Data centres are the backbone of digitalisation. However, they do use a lot of energy, and demand is rising. As we are aware of this issue, we design our data centres to be climate-prepared. Just one example: The City of Vienna's data centre in the Donaustadt district, which was taken live in 2013, was the first data centre in Europe to be awarded top scores ("Green Star") for operational security and energy efficiency by the German Association of the Internet Industry. Ambient air and local groundwater are used to cool computer rooms, a feature that has for some years now been utilised to also supply air-conditioning to neighbouring office buildings. During some months of the year, cooling units can remain switched off, which saves a lot of energy.



53. We keep actively upgrading our IT architecture and controlling our systems environment. For this purpose, we set up an architecture board in 2023 to optimise our IT architecture management activities.

54. We are taking measures to improve interoperability across all of the city's IT systems. For this purpose, we will introduce state-of-the-art API management to integrate services within the municipal administration as well as with partners from business, academia and government. This project has been launched in 2024.

55. We are using cloud services, both in the City's own data centres and in the form of public cloud services, wherever these are especially efficient and well established on the market. We will be setting up Kubernetes clusters to be able to also operate private cloud systems.

56. The Cloud Strategy 2022 introduced processes for reviewing potential cloud applications in terms of contents, legal effects and technical requirements. When it comes to providing critical infrastructures and fulfilling sovereign tasks, we rely mostly on infrastructure owned by the City of Vienna to safeguard our autonomy and sovereignty.



Best Practice

City of Vienna cloud compliance: Cloud services have become a crucial feature of modern-day IT infrastructures. The City of Vienna has set up a cloud competence team to review cloud services based on clearly defined in-house rules and processes for potential use in city services and infra-structures. For the graphic design of our digital services, for example, it is admissible to resort to state-of-the-art cloud tools. Infrastructure control on the other hand, for example of traffic lights, is handled in the city's data centre and will never be transitioned to cloud operation, so as to keep Vienna's infrastructure under full control and well protected against attacks from outside.

57. We leverage the potential of AI and rely on a risk-based approach to set out a framework of rules for its transparent and trusted use by the city administration and related stakeholders. To be able to cope with the broad range of AI topics, we keep in constant contact with national and international experts.

Best Practice:

Artificial intelligence is bound to have a strong impact on the workplace in the near future. City of Vienna staff will increasingly be confronted with new digital tools that are underpinned by artificial intelligence and will integrate these tools into their day-to-day work. The AI Compass provides in-house staff with basic rules for how to use and apply generative AI tools, for example to create text and images with AI support. Current rules explicitly allow the use of generative AI for work purposes, in a bid to take the city administration to new levels of efficiency and state-of-the-art software use. The City of Vienna has developed the KITT sharing and learning platform (KITT is a German abbreviation for hints and hacks for working with AI in practice) to support collective learning within the organisation, for instance by offering training in prompting.

58. We are identifying useful fields of application for the IoT (Internet of Things) in a bid to raise both quality of service and quality of living for the people of Vienna. Examples include the automated reading of water meters using the LoRaWAN® technology or the automatically scheduled watering of newly planted trees. To this end, we are setting up a suitable IoT infrastructure and building up the necessary capacities in collaboration with partners of the City of Vienna.

Best Practice:

Vienna Water currently operates some 104,000 water metres all over the city. About 40 per cent of these metres are located in shafts and are difficult to access, mostly through maintenance holes. For this reason, they are currently being read manually, which ties up a lot of resources and comes with a certain risk of injury.

In the PoC phase of the FASZL project, which was carried out jointly by Municipal Department 31, Wien Energie GmbH, Wiener Netze, and Municipal Department 01, it was established that it was feasible to remotely read out the data of shaft metres using LoRaWAN®. Starting in autumn 2024, all shaft metres will be replaced.



59. Vienna runs the Vienna Geospace Hub, an innovation lab for using satellite data, which is co-funded by FFG, the Austrian Research Promotion Agency. Planned projects include the measuring of heat islands, air quality, etc.

60. When it comes to using and trying out technologies, we apply open technical standards and use open source software so as to ensure as much interoperability and vendor independence as possible. Where applications are particularly critical, we rely on autonomous IT systems owned by the City of Vienna, as necessary

61. The Vienna Business Agency has partnered up with the Vienna City Administration, the university of applied sciences Technikum Wien, the European FIWARE foundation and partners from the Czech Republic to create an Open Source Innovation Hub. The goal of this initiative is to help businesses in Vienna use open source and open data solutions in a bid to strengthen the independence and interoperability of their services.

62. We will draw up a report on the use of open source software (OSS) in Vienna to document the broad range of potential use cases.

OPEN DATA AND NEW DATA SPACES

63. Every three months, we will make more information available as Open Government Data (OGD). To make accessing such data easier, we will be driving data visualisation using tools such as ViennaViz.

64. In 2024, we are setting up the Urban Data Space Smart City Vienna based on standards for trusted data usage. As this will help strengthen trust in governance, it will also be easier to justify and implement pro-active steps with respect to using and linking up data sets.

65. We will broaden the scope of the City of Vienna's digital twin for data analysis, planning and simulation purposes in a bid to create a live digital replica of the city. This step will provide better data to inform decisions and illustrate future projects and their impacts on everyone in Vienna.

66. Basis for data use: we plan to establish a secure Health Vienna data space with due respect of the existing legal framework.

Governance

With its Digital Agenda, the City of Vienna has laid down binding goals, which will be achieved by taking appropriate action. We will present an annual report to the Digitalisation Executive Board, which will be published on digitales.wien.gv.at.

A brief feedback process is scheduled for 2027 to evaluate how far along we are on our journey towards achieving our goals.

Appendix:

Guiding principles of the Vienna model

CENTRED AROUND PEOPLE

Administration means providing services to citizens. Digitalisation helps create new offers and improve both the availability and quality of our services. Our goal is to automate our services for citizens to such an extent that requests can be promptly processed and completed in the digital space. In doing so, we switch our perspective to put ourselves in the citizens' shoes.

STANDARDISATION

The aim is for digital technologies to be applied on a broad basis and to be reliably available. To achieve this, we will be standardising and optimising our technologies on an ongoing basis.

STATE OF THE ART

In a bid to allow citizens and businesses to benefit even more from our services, we embrace the use of state-of-the-art technologies such as AI and cloud services.

SECURE AND TRUSTED DIGITAL CITY

Citizens must be able to trust that their data are in safe hands with the City of Vienna. The safety and security of digital infrastructures, digital services, data and communications is at the top of our agenda.

DIGITAL EQUALITY AND PARTICIPATION

Our aim is for the digital public to be as inclusive as possible. The principles of inclusion and equal opportunity are crucial when it comes to developing and providing digital infrastructures and services. We will rely on technology to increase the level of inclusion.

Government administration services will continue to be provided non-digitally, alongside support being offered on how to use digital channels.

PARTICIPATION

Digital channels offer a variety of ways to participate in public life, wherever people are and whatever the date or time. We pool participative digital offers on the central platform "mitgestalten.wien.gv.at" to enable citizens to come up with creative and innovative solutions for our city, in a peer-to-peer approach.

GENDER EQUALITY

In developing and providing digital services, we pay special attention to gender-neutrality and/or gender-specific requirements. We

actively promote women in IT and women in digitalisation to achieve gender-equitable participation in the digitalisation process.

DIGITAL ACCESSIBILITY

We pay special attention to making our digital offers and services accessible.

COOPERATION WITH ACADEMIA, BUSINESS AND TECHNOLOGY PARTNERS

Digitalisation in Vienna is characterised by cooperation with academia, businesses, the social partners and other local government entities.

The success of many projects can be attributed to joint preparation, regular consultations and well-working networks and funding structures. The City of Vienna has joined forces with partners to counteract the lack of skilled labour, to align strategic approaches (for example Strategy Vienna 2030 – Vienna Economic Council) or drive standardisation in e-government (based on a cooperation between the federal, regional and local levels of government).

INNOVATION CULTURE AND INFRASTRUCTURE

We actively seek collaboration with the digital economy, with academia and with other local government entities. We strive to combine the principles applicable to the use of public resources (legality, economy, efficiency and effectiveness) with those of digitalisation (agility, culture of failure, etc.) to arrive at innovative solutions.

RIGHTS OF CHILDREN AND YOUNG PEOPLE

The interests of children and young people must be given special attention, not least from a digital humanism perspective.

We subscribe to the principle, set out in the Austrian constitution, that the welfare of children always takes precedence and that their rights must be structurally implemented so they can be safeguarded also in the digital space.

INDEPENDENT AND RESILIENT DIGITAL CITY

As a city, Vienna provides key digital services to citizens and businesses on its own account. This means that Vienna operates its own data centre and relies on proprietary organisational IT skills to make structures more independent. When acquiring digital products, we see to it that IT solutions allow us the greatest possible extent of control over the systems used and ensure transparent data processing and security functions. What is more, the digital infrastructure and the digital services needed to keep the city administration operational must be resilient.

OPEN CITY

Our basic approach to digitalisation is openness. We are committed to openness to new technologies and their useful, resource-efficient application. Our design approaches are based on open standards, to ensure both the inter-operability of technical systems and our digital autonomy. We give citizens free access to administration information, data and figures. Open by Design is our guiding principle when it comes to publishing information, and we will continue to make open data publicly available for all types of use.

