Digital Humanism in Vienna.

City of Vienna

Dear reader,

Vienna fosters and promotes developments rooted in social responsibility. This principle also serves as our guideline for digitalisation. The goal lies in actively shaping digitalisation, so that human beings with their social and societal needs are always at the centre of this development.

Digital progress is not to benefit merely part of the population but rather all people living in Vienna. We regard this challenge as an opportunity to encourage human-centric innovations: High-quality digital solutions originating in Vienna are to embody fairness, transparency and self-determination all over the world.

Vienna wants to be a city where digital solutions are developed and implemented that benefit people in sustainable and inclusive fashion, in keeping with the tenets of a new Digital Humanism. The present brochure aims to inform you about precisely this objective – the Viennese way to Digital Humanism.

Yours sincerely,

Michael Ludwig
Mayor of Vienna

What is Digital Humanism?

Opportunities and challenges of a digital world

The future is now. Just like the steam engine, which turned the world on its head about 300 years ago, today's digital technologies are pervading our everyday routines and changing the way we live, work, conduct business, learn, communicate, shop, visit a doctor, move, spend our leisure time or shape our city. Not even 50 years ago, the situation was a very different one.

Digitalisation allows for progress in many areas and facilitates our lives. It renders numerous products and services more affordable, more accessible or simply easier to use. With just one click, tasks that formerly would have entailed a long paper trail and several visits to public authorities can be handled from the comfort of one's home. And this is only the beginning.

The past few decades have brought many changes. Who knows what the world and our everyday lives will be like in 2100?
At the same time, technological developments and the enormous volumes of available data also pose many challenges: Potential surveillance and control, techniques to subconsciously influence users and their behaviour (also in the context of democratic processes), cyberbullying and cyber-crime are just a few of the risks that accompany digital transformation. Digitalisation raises many questions, the most urgent being: How do we want to deal with this new situation? What should the digital world we inhabit look like? Who is actually meant by "we" – whose needs and values count? What characterises a "good digital life"? Although it often is presented as such, technology is not neutral. Rather, it is designed by us – human beings with all their different viewpoints. We also must address the question of how we deploy technologies and how they affect us as individuals, our society and the environment. Is top priority given to progress at any cost? Do we want universal compliance with "peace, law and order" – even if this means constant surveillance? The world over, societies choose different ways of shaping the digital future. Vienna wants to go its own way – the way of Digital Humanism.

DIGITAL HUMANISM AS A GUIDING PRINCIPLE FOR THE DIGITAL FUTURE

Since technologies are created by us humans, it is also up to us to choose the way in which we deal with them and use them. We in Vienna want to place the wellbeing of people at the centre of all developments. It is the purpose of digital technologies to facilitate and improve the lives of their users. Their benefits should be accessible to all. The City of Vienna assumes its socio-political responsibility and role as agent shaping these developments, creates appropriate framework conditions and also counteracts or prevents undesirable developments. It has done so already many times in the past. In fact, the City of Vienna has implemented decisive and society-shaping measures in a great variety of fields that range from social housing, the enforcement of workers' rights and the promotion of education and lifelong learning to constant investments in infrastructure and, hence, in the quality of life of the population. Inclusion, diversity, self-determination, community sense and solidarity characterise the services of general interest as well as social life in the Austrian capital. But what does "placing people at the centre" signify in the digital world?

The present brochure tries to give substance and meaning to the concept of Digital Humanism. It invites readers to take part in an active development process rooted in joint reflection and discussion. The following section suggests options that outline how to ensure the smooth functioning of our digital life based on shared rules, how to protect privacy and security, and how to shape and steer our democracy.
The second part draws on concrete thematic areas and selected examples to highlight how Digital Humanism could function in practice and which wide-ranging areas of our lives it actually comprises. Of course, the sheer number, dimension and range of these ideas necessitated the involvement of many minds – the last pages provide an overview of the individuals who have played a part in the development of this brochure as well as of the vast network of players engaged in evolving and advancing Digital Humanism in Vienna. Finally, some key questions towards the end of this brochure are to support readers in determining whether an innovation is merely digital or rather "digitally human".

The final section of the brochure also provides a panorama of measures for implementing Digital Humanism in Vienna.

Ethics and regulation

Which ground rules do we set ourselves for a “good digital life”?

Digitalisation pervades our lives and changes economic and social conditions. Participation and empowerment to join in political debates and discussions are rendered easier and simpler by digital platforms, forums and direct digital communication. In theory, every person with a smartphone and Internet access can reach a worldwide audience with his or her messages. At the same time, many people active online are exposed to polarising, sometimes insulting discussions.

The mingling of private and public life has become reality. Information that impacts our sense of right or wrong ends up unfiltered in social media newsfeeds. These developments urge us to strive for more judicious ways of dealing with the possibilities and hazards of a direct audience and immediate opinion-forming.

FORMULATING GROUND RULES
We have developed ground rules and a basic ethical framework that enables us to have a good life – a life in dignity. We must direct these efforts towards the digital area as well. The City of Vienna is actively confronting this challenge and makes its contribution to helping shape a “good digital life” for all: This includes the definition of, and compliance with, ethical guidelines for dealing with technologies as well as the preferential promotion of entrepreneurial and economic initiatives that place human wellbeing at the centre of the digitalisation process.

MANIFOLD CHALLENGES
The importance of these efforts by the City of Vienna is emphasised by the manifold challenges faced by people in the digital area. Digital media impact our self-determination. Algorithms, echo chambers and filter bubbles modify the way in which we perceive reality; their very size makes big platforms and technology corporations seem beyond any control. Conversely, the individual is increasingly losing control of private data, and the growing digital divide is becoming a threat for our society. The challenges faced by individuals, society and the rule of law are manifold.

CONCRETE GOALS
In a networked world, these manifold challenges cannot be successfully dealt with by one party alone. Within its sphere of influence, the City of Vienna will reliably ensure the establishment of regulatory measures that govern the responsible use of data for scientific, societal, medical or social purposes. In this context, the concept of Digital Humanism is to serve as a guideline and point of reference to safeguard that the opportunities of digitalisation will benefit people and that user rights will be observed also in digital space.

ETHICAL ISSUES
Digital space is subject to a variety of legal norms, such as the General Data Protection Regulation. Digital innovations require the further development of these provisions.

However, their enforcement remains an elusive subject: Who is to assume responsibility if decisions are taken by software? How can digital rights be legally asserted? What is digitally feasible is not only restricted by what is permitted by law. Rather, ethical issues are involved as well: How should we handle our data? Are there limits to anonymity on the Internet?
Or may artificial intelligence handle any sort of task and take any kind of decision?

Ultimately, the core question is no less than: In what digital world do we want to live?

What is needed for digital self-determination?

Vienna's high quality of life is rooted in the city's services of general interest. For the Viennese population, it is practically a given that energy and water supply, transport services, telecommunications, street cleaning as well as waste and wastewater disposal will always function smoothly. But how can this quality of service for a good life be translated to the digital area?

DIGITAL SOVEREIGNTY
Data are a key basis for the provision of general services in the digital field. This applies both to traditional services of general interest (energy, water, transport, etc.) and to digital services newly created in the wake of digitalisation.
However, digitalisation aimed at the common good as well as digital services that meet individual needs require a resilient and open IT infrastructure.

The City of Vienna promotes self-determined and sovereign lifestyles also in the digital field and advocates a fair data economy. Hence, the City of Vienna will always foster and support the ground rules of open data, open source and open standards and in its turn will employ them wherever this is possible and feasible. This permits open co-operation forms without dependencies, strengthens local players and prevents the outflow and, hence, the loss of value created in our city.

Moreover, these principles establish trust in data, in their origin and in technologies as well as nurturing mutual trust between all parties involved.

DATA EXCELLENCE
The City of Vienna is true to the open-by-design principle and publishes open data. All data that are not personal or confidential are made accessible publicly and freely without cost. Private individuals, enterprises, science and research are thus enabled to develop creative new services with these data.
The responsible handling of data calls for a clearcut definition of roles, competences, parties in charge and processes that ensure the control and quality of Vienna's data. The data excellence of the City of Vienna governs the efficient completion of tasks and data networking while ensuring that the data are used sparingly and always with due diligence.

DATA SOVEREIGNTY
The City of Vienna participates in the GAIA-X project, which represents the fundamental European values in the field of data economy – sovereignty, openness, fairness, security and trust.
GAIA-X creates the framework for a data infrastructure that takes account of data sovereignty, data protection, confidentiality, security, technology neutrality and interoperability.

INTERNET?
BUT OF COURSE!
The City of Vienna wants all people in Vienna to be able to enjoy the benefits of digitalisation and digital services in equal measure. Internet access is a minimum requirement towards this goal. To establish fair, high-quality framework conditions of Internet access for citizens and enterprises, the City of Vienna co-ordinates strategic broadband deployment in Vienna in close co-operation with all network operators.

Privacy & Security

How secure is the new digital world?

Digital business models are based on data use. There exists an imbalance between enterprises that pursue data-driven business models and process personal data to optimise or sell their own services and products on the one hand and their users on the other hand. This is due to the fact that users often have a choice between two options only: Either they agree to the processing of their data or they refrain from using or purchasing a given product. At the same time, the individual user is practically unable to verify whether the personal data submitted are actually protected. How can we retain sovereignty of our personal data? How can we ensure secure use of the opportunities offered by the digital world?

PROGRESS VS. SECURITY?

The City of Vienna is convinced that technological developments should not be implemented at any cost – digitalisation is no end in itself. The right to data privacy and data sovereignty – i.e. to self-determined control of the collection, storage, use and processing of a person's data – does not run counter to technological progress. Risk-benefit considerations and discussions will always be required before any new technology is deployed. The City of Vienna wants to further these discussions and innovations in compliance with the provisions of data protection legislation.

HIGH DATA PROTECTION STANDARDS

Digital processes and services generate a wealth of digital, often personal data, whose handling and processing call for particular caution. Data protection must be already considered and incorporated in the design of new services as well as in the revision of underlying processes (privacy by design).

At the same time, the principle of transparency, which is a basic element of data protection law, can only be safeguarded if due account is taken of the user experience.

In its role as trustworthy service provider, the City of Vienna ensures internally that citizen data are never merged without a sound legal basis. Moreover, the City of Vienna demands compliance with high standards under data protection law not only from itself but also from its service providers. Hence, all contractual partners irrespective of their size and market power must demonstrably comply with all legally applicable data protection requirements. The progress of digitalisation also necessitates the further development of data protection.

A SAFE CITY – OFFLINE AND ONLINE

The City of Vienna safeguards compliance with the protection objectives of information security, i.e. confidentiality, integrity and availability of data. This can only be achieved by taking suitable safety measures across all systems. In addition to the necessary technical measures, the City of Vienna also trains its entire staff regularly in the field of information security.

To ensure that it will remain a safe, secure and socially just city also in the online sphere, the City of Vienna will add a cybercrime helpline to its roster of services in order to assist its citizens with related problems. Thus, persons who suspect that they may have fallen victim to cybercrime will receive free-of-charge initial information and recommendations for further action.

How democratic is the digital world? How does digital participation in Vienna work?

Digital participation tools and communication via social platforms simplify the individual's participation in the political discourse and in shaping his or her living environment. At the same time, though, new challenges for the democratic discourse are emerging. The effective combination of online and offline formats for participation and the promotion of digital empowerment enables people in Vienna to contribute to the sustainable transformation of their city.

MOBILISING SOCIETY
Digitalisation offers civil society the possibility to strengthen active participation and, hence, can serve as an instrument to enliven democracy. Digital media can help to nurture a positive understanding of democracy. Grassroots initiatives, such as "Fridays for Future" or "#MeToo", highlight the mobilising power inherent in digital technologies in order to move specific issues to the forefront of political discourse.

The City of Vienna uses digital media to communicate socially relevant issues directly and to broad effect and encourages the people of Vienna to play a role in shaping their city.

STRENGTHENING EMPOWERMENT
New forms of participation and empowerment support the commitment to civil society as well as the willingness to have a say in shaping and determining social developments. For example, the City of Vienna's online platform simplifies the participation of citizens in urban development (mitgestalten.wien.gv.at).
Instant data transmission and data evaluation create new possibilities for democratic participation with minimal transaction costs. The open character of this platform also enables individuals not entitled to vote in Vienna to have a say and supports them in participating actively in the urban development of their city.

FACT? – CHECK!
At the same time, digital forms of communication constitute a hazard for democratic processes. For many people, social media are the single most important information source. However, contrary to traditional media, the operators of social media platforms are under no obligation to check the factual correctness of information. Driven by the business models of platform operators, the use of social bots and the effects of filter bubbles, debates can more easily get out of control, leading to social polarisation and fragmentation.

Within its sphere of influence, the City of Vienna views itself as an active agent also in the digital field. Messages posted by users on platforms operated by the City of Vienna must reflect the principles of respectful and open discussion and stand up to objective fact-checking. This actively combats fake news as well as the deliberate spreading of disinformation.

FORMULATING RULES
Moreover, the City of Vienna advocates the development of legal framework conditions and rules of participation that ensure a fair and respectful use of digital technologies. To support Vienna's population in dealing considerately and reasonably with digitally acquired information, the City of Vienna fosters the strengthening of digital education and media literacy.
Digital empowerment is to promote inclusiveness and to establish low-threshold access to information for all. However, there will be no "digital coercion": Population groups who are not digitally literate must still have the possibility to participate in an offline context.

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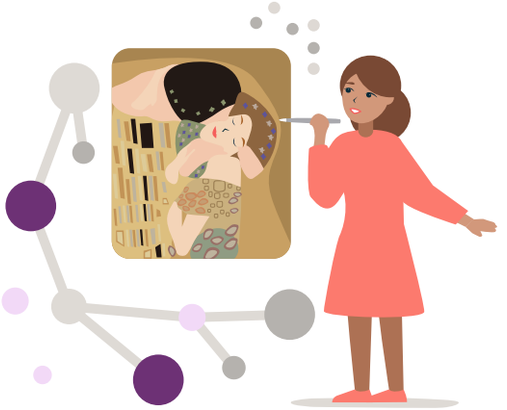

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Digital Humanism
in the thematic area of

Work

Good and fair working conditions in a digital world

How do we want to work today and tomorrow?
What will be the role of digital technologies?

In recent years, the working environment has been strongly impacted by digitalisation – from tasks, work processes or skill requirements to the workplace itself, which is more flexible both in time and space than ever before. To enable all workers to benefit from the advantages of digital change, it is essential to translate workers' rights into the environment of tomorrow.

SUPPORT AND FLEXIBILITY DUE TO DIGITAL TECHNOLOGIES

Machines simplify our work routines. They not only handle monotonous, hazardous or physically strenuous activities but also offer support in complex analyses, e.g. in case of huge data volumes or with diagnostics in the healthcare sector, thereby enabling people to take better-informed decisions, discharge their responsibilities more efficiently and dedicate more time to creative or conceptual tasks. Digital tools offer people with disabilities new and better opportunities in the employment market. Moreover, digitalisation enables many persons to work anytime and anywhere – for example, from home – and creates easier access to expert knowledge and further training independently of one's employer. Additionally, new technologies that give rise to new products and services create entirely novel job profiles, such as "user experience designer".

THE PITFALLS OF DIGITAL WORK

Apart from all these advantages, though, digital technologies also entail challenges. The fast pace of our world and of these changes as well as the pressure on people to adapt accordingly are proving particularly massive. Flexible work conditions and the need for constant availability can cause the line between work and private life to become increasingly blurred. Only few persons actually have a true workplace at home. Sitting eight hours on a wooden folding chair in front of a small laptop screen perched on the dining table would likely incur the wrath of the Labour Inspectorate. The digital divide in our society also becomes visible here: Some people cannot do their job on a remote basis or do not dispose of the digital skills to do so; some even fear that their job will in the future by handled by robots or machines, resulting in their becoming redundant. Moreover, entirely novel, sometimes dubious work models are emerging as well (e.g. via platforms that do not employ workers but simply match them with jobs), such as "bogus self-employed" couriers, who as a consequence do not enjoy regular workers' rights to social benefits under labour law.

PROTECTION AND FURTHER DEVELOPMENT OF WORKERS' RIGHTS

Digitalisation in the work environment must not be limited to enhancing efficiency at any cost! Rather, it must also be about improving working conditions and supporting workers in dealing with digital change. In the spirit of Digital Humanism, the digital transformation must be socially sustainable. Health and safety at the workplace, equal opportunities, inclusion and the protection of workers' rights must also be upheld in a digital world – and further developed in parallel with the new technologies!

VIENNA RIDERS COLLECTIVE

Bike courier services have grown rapidly as a consequence of digitalisation and, at the same time, have enticed many persons to accept the conditions of risky bogus self-employment. The Riders Collective founded by the Austrian Trade Union Federation (ÖGB) offers Vienna's food and parcel couriers on bike customised digital tools and a central hub providing advice, events and exchange for workers engaged in this new platform economy.

Digital Humanism
in the thematic area of

Education

Digital education and skills for all citizens

Where and how do we acquire digital skills and prepare for the future? How can we manage to include everybody and leave no-one behind?

Vienna is the biggest university city in the German-speaking region and boasts a comprehensive and capillary educational system. Education is assigned great importance. High quality of life also includes the possibility of being able to acquire the desired knowledge and skills at any age.

INDIVIDUALISED LEARNING CONTENT ON DEMAND

This is where digitalisation comes in useful, as it facilitates the access to learning content. The Internet offers information and instructions to acquire near-limitless know-how for many different skills. The COVID-19 pandemic further expanded these offerings: More and more professional teachers and other providers put up content online – teaching has found its way into the digital world. Learning content for digital education is presented in a different way than in a purely "analog" classroom. This enables students to acquire knowledge in individualised, interactive fashion, e.g. by means of problem-based learning, videos, podcasts, texts, games – anywhere and anytime!

WE ALL STILL HAVE A LOT TO LEARN

Digitalisation not only influences the way in which we learn but also what we learn. New skills are called for in all areas of life! This starts with the ability to critically examine digital tools and services and make use of them in a judicious and informed manner. How does my smartphone work? How can I protect my data? How do I know whether information found on the Internet is actually true? But we also need new skills for the professions of the future. 50 years ago, a job such as "app developer" would have been unthinkable. Which kinds of jobs will there exist in 2080 that we cannot yet conceive of today? To be best prepared for the tasks of the future, it is also essential to strengthen those skills that make us human: Empathy, critical thought, creativity in problem-solving, communication, co-operation and mediation! All this requires new didactic approaches and the informed use of analog and digital learning methods.

Above all, learning is characterised by a social component that must not be lost in the shuffle: Making friends with the person sitting beside you is more difficult online than in the classroom.

DIGITAL SKILLS FOR ALL AS A BASIC REQUIREMENT

We can only take full advantage of the benefits embodied by digitalisation in education if everyone has access to them. Nobody must be excluded because of a lack of infrastructure or skills. In the spirit of Digital Humanism, it is thus a task of the City of Vienna to enable all citizens irrespective of age, gender, origin, provision with equipment or level of education to acquire digital skills and know-how for the well-informed and safe use of digital tools and services. This is the only way to ensure that the citizens of Vienna will be able to play an active role in the digitalisation process. As a logical consequence of this demand, the digital offerings of the City of Vienna must be low-threshold regarding accessibility and use as well as completely transparent.

AVATARS IN SCHOOLS

Avatars are remote-controlled cameras that transmit images and sound via an app from the classroom to the tablet or smartphone of bedridden, chronically ill children. Despite their protracted physical absence, these kids are thus able to follow their teachers and classmates via live stream, making them feel less lonely and isolated. The first successes with the AV1 avatar by No Isolation, a Norwegian company, were achieved by the Vienna Hospital School (Heilstättenschule Wien) in co-operation with the Comprehensive Center for Pediatrics (CCP) of the Medical University of Vienna and the Vienna General Hospital (AKH); together with other project partners (die Berater company, Occursus, 42virtual, association Herzkinder), the City of Vienna financed the first avatars.

Digital Humanism
in the thematic area of

Economy

Digitalisation as a driver of the local economy

How can Vienna's businesspeople use digital technologies to their advantage? How can we formulate framework conditions to avoid potential negative impacts of the digital economy on the community?

Digitalisation is changing the global economy. Already existing processes are accelerated and improved; new business models are emerging. Vienna enjoys an excellent reputation as a hub of education, research and business. The digitally networked world offers local players many opportunities and potentials to tap – even if global competition has never been as tough as today.

USING POTENTIALS FOR OPTIMISATION, THINKING BIGGER AND MORE GLOBAL!

Automated processes, robotics, digital networking along the value creation chain, online trade and much more: Digital technologies are a driver of innovation and increase productivity and efficiency in many enterprises. Novel products, services and business models broaden the range of offerings or open up new markets also on an international scale. A networked, globalised world makes this possible: Spatial distances no longer constitute a major challenge – not only for some services but sometimes also for workers. The low transaction costs of information and communication enlarge the potential activity radius of enterprises. The opportunities and potentials for Vienna's economic operators are made more varied by digitalisation.

UNEQUAL POWER DISTRIBUTION: A MAJOR CHALLENGE

At the same time, however, global networking renders competition tougher and tougher. Disruptive business models are turning entire business sectors upside down and jeopardise regional economic cycles. A case in point is provided by the platform economy, which matches supply (e.g. of accommodation) and demand (e.g. by travellers). The value and usefulness of such platforms increase with the number of users, resulting in a competition-distorting power concentration of platform monopolies. Consumers are effectively "forced" to use these platforms in order to participate in public, social and economic life. Platforms collect, analyse and commercialise the (in part personal) data of users to influence their behaviour and encourage consumption by means of targeted advertising.

National and international laws must create adequate framework conditions to ensure fair competition. The challenge lies in the fact that many enterprises offering digital services pay taxes on their profits only in their country of domicile but not in those countries where their services are actually sold, leading to a loss of fiscal revenue for the public sector.

DIGITAL HUMANISM AS A LOCATION ADVANTAGE

Digital Humanism in the digital economy means establishing framework conditions to avoid (potential) negative impacts of digital business models and technologies on individuals and society at large – for example, by supporting Viennese enterprises and research institutions that incorporate the values of Digital Humanism in their orientation and strategy and handle user data in transparent and responsible fashion. Vienna has the opportunity of positioning itself as an internationally recognised economic centre where business models and technologies reflect the principles of Digital Humanism.

CERTIFIED AI

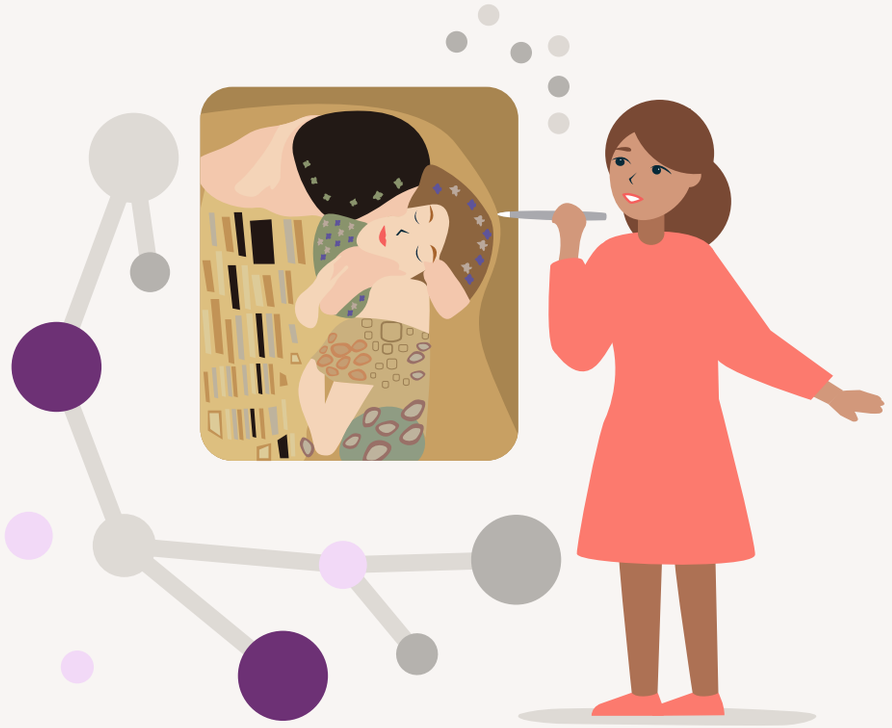
The Vienna Public Utilities have developed an AI solution that automatically categorises, analyses, evaluates and relays written customer queries and, in this way, reduces their employees' workloads. The international standardisation body IEEE SA examined this procedure for its compliance with transparency, accountability, avoidance of algorithmic bias and protection of privacy. The outcome is the first-ever ethics certification of an AI solution awarded to a public corporation.

Digital Humanism
in the thematic area of

Art & Culture

Shaping the future and reflecting on society

How can we design new technologies in sync with human values and needs?
How can we make use of digitalisation to render art and culture more easily accessible?



Creative minds and artists have always addressed the current situation of society in their works – often in a critical way that provides food for thought. Digitalisation is changing us and the world we live in. Through their work, artists create spaces of freedom that enable us to identify and reflect on these changes.

NEW TOOLS FOR ARTISTS AND NEW POSSIBILITIES OF EXPERIENCING ART

Digital technologies provide new forms of access to art and culture. With a smartphone, we can listen to almost any song in the blink of an eye, walk through the Paris Louvre or stream an opera performed in Sydney in real time. Virtual reality headsets enable us to dive even deeper into artworks. Digital technologies can thus support the sector of art and culture by rendering well-known material digitally accessible – but they can also create new experiences, processes and discourses for the audience. Moreover, digitalisation opens up new ways and means of archiving artworks and preserving them as part of our cultural heritage. In their turn, artists can make use of new tools through digitalisation: The brush tool of image editing programmes replacing the conventional paintbrush is just one of innumerable examples. The stage, too, is widening: Global networking provides access to a vast audience.

ART AND CULTURE AS A MIRROR OF OUR TIME

Digitalisation does not only impact art and culture but also works the other way round: Artists and designers can shape technologies according to human values and needs – in this way, digital space becomes more human and user-friendly for the public.
Moreover, art helps us to understand our increasingly complex world. Artists point to trends that we often do not consciously perceive as such; in this way, they critically examine our development as a "digital" society.

WHAT IS THE VALUE OF DIGITAL CREATIVE WORK?

While digitalisation entails many advantages for artists, it also confronts them with new challenges. Digital artworks are easier to copy and disseminate, which often happens without naming the author or authors or paying them for their work. Therefore, the digital world in particular needs fair rules to ensure the free development and just remuneration of artists.

DIGITALISATION AND ART: SHAPING THE FUTURE TOGETHER

In the digital world, it is essential to support artists with their visionary and critical talents, to create open spaces for diversity, and to protect copyrights and exploitation rights. Digitalisation offers us the possibility to render art and culture accessible for many people, who in this way can experience and actively engage in shaping cultural production – let's make use of it!

URBAN HISTORY FOR ALL

The Vienna City Library at Vienna City Hall is digitising its entire correspondence holdings and, in this way, is making the history of Vienna (approximately 160,000 items!) accessible online for all interested parties. With "Wir schreiben Geschichte" ("We Write History"), the Wien Museum and the Vienna City Library invite all interested citizens to transcribe letters, postcards and other written material. In this way, volunteers contribute to archiving the history of our city. After all, knowledge only comes alive if it can be understood and read.

Digital Humanism
in the thematic area of

Health

A healthier and longer life due to digital technologies

How can digital technologies help us to enjoy a healthier and longer life?
And how should we deal with health-related data, which are particularly sensitive?

Digital change entails progress also in the field of medicine and can significantly improve our quality of life both in preventive healthcare and medical treatment.

OUR HEALTH BENEFITS FROM DIGITALISATION

The sheer quantity of available data offers an unprecedented basis for science, research and well-informed decisions – in particular in the area of medicine. Comprehensive patient data can thus be collected, stored and used in conjunction with new technologies and modern imaging techniques for novel methods of diagnosis and therapy. In case of huge and complex data sets, artificial intelligence can prove of assistance in diagnostics. The deployment of digital innovations paves the way towards personalised medicine. Health platforms, such as the ELGA portal (a person's electronic health record) that contains eResults and eMedication lists, provide an overview of the respective patient's medical and medication history. Access to medical services can be facilitated by telemedicine care. Chronically ill patients can benefit from telemonitoring, where vital signs including blood pressure, pulse or weight are transmitted to a medical centre and duly analysed by medical staff. If required, the patient's therapy is then modified. In the field of medical engineering, digitalisation permits the production of prostheses with 3D printers, technical tattoos or smart contact lenses. The goal lies in improving patient care and enabling doctors and nursing staff to dedicate more time to their patients thanks to the deployment of digital technologies.

SENSITIVE HANDLING OF SENSITIVE DATA

Health-related data are sensitive. Hence, service providers are called upon to handle these data with the utmost caution. Patients expect public bodies to observe discretion and to use these data with prudence. At the same time, however, people are often unaware that they are voluntarily communicating their own health-related data to global corporations via smartwatches and health apps. Information campaigns and legal provisions are to enhance general awareness regarding data protection aspects.

FUNDAMENTAL MEDICAL VALUES ALSO IN DIGITAL SPACE

Yet, despite all advantages of cost savings and efficiency increases afforded by digitalisation, the focus must always be on human beings. Do we really want artificial intelligence to take decisions that impact the health of people? And if so, under what framework conditions? How can we safeguard a humane medicine for the humans of the future? Digital Humanism offers a clear answer to this question: The fundamental values of medicine must also prevail in a digital world. Ethics commissions ponder the ethical consequences of innovations and research projects for patients. Access to medical care must be ensured irrespective of whether a person disposes of digital skills or not. The relationship of trust between doctor and patient remains of central importance; medical decisions will continue to be taken by humans.

KÄLTEAPP

The KälteApp (Cold App) of the Vienna Social Fund enables passers-by to communicate where and when they have noticed homeless persons in need of help. A team of street social workers follows up on all sightings and assists homeless persons by providing them with sleeping bags or places to sleep or by offering practical counselling.

Digital Humanism
in the thematic area of

Sustainability

The digital transformation must also be a sustainable one

How can digital technologies help us to protect the climate and environment and save resources?
And how can we achieve this goal without consuming a disproportionate amount of energy in the process?

A liveable future is contingent on an intact environment. For this reason, a digital transformation that places people at its centre must also aim to preserve the foundations of human existence. Digital technologies can contribute significantly towards reducing resource consumption.

DIGITALISATION SUPPORTS THE GREEN TRANSITION

Today, digitalisation can make a substantially greater contribution to decreasing greenhouse gases and protecting the environment than just a few years ago. In fact, the attainment of our climate goals will only be possible in conjunction with the target-oriented deployment of digital possibilities. Correctly used, digitalisation thus is a tool to e.g. advance the transformation of urban mobility or the energy system and foster the development towards a circular economy. Better monitoring and control of activities and urban infrastructure facilities can enhance resource efficiency in all areas of life. By drawing on artificial intelligence and sensors, it will therefore be possible to operate buildings in a more environmentally friendly manner or to control traffic flows more efficiently.

THE BENEFITS OF DIGITALISATION MUST BE GREATER THAN ITS RESOURCE CONSUMPTION

However, sustainable digitalisation must not be taken for granted, as the use of digital technologies does not automatically curb resource consumption. Actually, the opposite has been true so far: Massive digital growth also causes related resource and energy consumption to increase. Turning the lights off when you leave a room is easy to do. But digital services, which constantly surround us, cannot be as simply and obviously switched off. Every message sent to a smartphone, every video streamed, every query to the smart home assistant to ask the time triggers server actions and, hence, consumes energy. The same goes for sensors controlling smart streetlights or for smart meters, whose data analyses help to cut down on electricity consumption. Clearly, these sensors not only use energy but also require resources in production. Some digital technologies are characterised by particularly high energy consumption, such as the generation of cryptocurrencies. For this reason, greater awareness, understanding and the judicious deployment and resource-saving operation of ICT systems are called for – so that a final tally will show that resource conservation trumps resource consumption.

DIGITALISATION AND CLIMATE

The City of Vienna is keen to save resources. Digitalisation is not merely pursued for the sake of technological progress. On the one hand, the focus is on concrete benefits for citizens; on the other hand, the ecological effects of digital tools are considered and weighed to clarify whether the impact of these tools is proportionate to the benefits obtained. On its way towards becoming a climate model city, Vienna is committed to a sustainable digital future.

VIENNA'S COMPUTING CENTRE

In 2013, the computing centre of Municipal Department 01 – Information Technology (IT department of the City of Vienna) was the first of its kind in Europe to be taken into operation after being graded top of class for operational safety and energy efficiency: eco – the association of the German Internet industry – awarded the centre its "Green Star". Significant energy savings were achieved in particular in the field of air conditioning due to the use of environmentally friendly equipment, ambient air and local groundwater.

Ecosystem

Vienna as a centre of Digital Humanism

With the publication of the "Vienna Manifesto on Digital Humanism" by the Vienna University of Technology in 2019, an entire "ecosystem" of players concerned with the city's way to digitalisation has sprung up in Vienna. The basic concepts of Digital Humanism are already a key element of the strategies pursued by the City of Vienna, e.g. the Smart Climate City Strategy or the Digital Agenda. Vienna aims to position itself not only as an internationally recognised Smart City and digitalisation capital but also as a centre of Digital Humanism. In addition to the City Administration itself, this also calls for a wide-ranging network of individuals and institutions that are committed to the values of humanist digitalisation and promote it with wide-ranging impact. Together with representatives of the social partners, NGOs, science and the economy, the digital transformation of Vienna is advanced according to the principles of ethics and humanism. Educational institutions, artists and cultural workers as well as digital and analog media on the one hand inform, explain and convey knowledge; on the other hand, they reflect critically on the digitalisation process and, hence, also serve a regulatory function.

Implementation

This is how Digital Humanism is implemented in Vienna

This brochure and the co-creation process that preceded it lay the basis for the further development of Digital Humanism by and within the Vienna City Administration. The City of Vienna has identified several instruments that help to implement the values of Digital Humanism:

FLAGSHIP PROJECTS:
Innovative projects that correspond to the criteria of Digital Humanism. These may be internal projects of the City Administration as well as projects realised by and with partners from science, the economy and civil society.

RESEARCH CALLS, FUNDING CHANNELS & CO-OPERATION PROJECTS:
Targeted launching and support of co-operation projects and calls for the further development of Digital Humanism in Vienna, with a focus on interdisciplinary initiatives; establishment of a body to promote research on Digital Humanism.

CERTIFICATIONS:
Certification of particularly sensitive software products on the basis of standards including those developed by the Institute of Electrical and Electronics Engineers (IEEE); integration of Digital Humanism criteria into existing quality management systems.

INCLUSION IN CONTRACT AWARDING PROCEDURES:
Consideration of Digital Humanism criteria when awarding contracts for new digital solutions to serve the City of Vienna.

COURSES AND TRAININGS:
Knowledge transfer and exchange on Digital Humanism in the context of existing institutions for basic and advanced education or universities, also taking the form of a separate study module or study programme.

GOVERNANCE:
Appointment of an interdisciplinary team composed of representatives of science, research, administration and business in the framework of the Vienna Digital Agenda in order to launch and foster projects aimed at implementing Digital Humanism; setting-up of an advisory board consisting of experts drawn from science, business and administration to support this team.

The following entities are charged with the implementation of Digital Humanism and the further development of appropriate instruments: Co-ordinating body: In co-operation with the Executive Group for Organisation and Security – ICT Strategy and Process Management Group (City of Vienna Chief Information Office), the Chief Executive Office of the City of Vienna – Office of the Director for Science, Research & Business Location co-ordinates the initiatives of the parties concerned with Digital Humanism in Vienna, supports co-operation ventures between the various players and promotes communication and awareness creation regarding this issue.

What is “digitally human”?

Some key questions to consider

DIGITAL SKILLS & PARTICIPATION

- Are future users involved in the development and implementation of new digital solutions as far as this is possible?
- Are citizens and staff members able to make use of digital technologies with confidence? Is additional basic, further and advanced digital training needed to be able to comprehend processes and participate in shaping them?

DIVERSITY, BENEFITS & ACCESSIBILITY FOR ALL

- Are digital solutions designed as user-friendly and barrier-free?
- Are the (digital) services of the City of Vienna accessible for all people irrespective of age, gender, origin or level of education?
- Do the digital solutions support diversity in our city? (Can algorithmic bias be recognised and prevented or minimised?)

ACCOUNTABILITY

- Have clearcut rules been formulated to govern the accountability for digital solutions? Is there a responsible body for each solution or product of the City of Vienna?
- Have the necessary measures been taken to create a resilient and sovereign IT infrastructure? Are the independence, self-determination and sovereignty of Vienna's City Administration safeguarded?
- Is human oversight still guaranteed in all decisions that directly affect another human being? (human oversight, human agency)

FAIR & TRANSPARENT DESIGN

- Are digital applications and (AI) decisions clearly understandable and transparent for users?
- Is information about the use of digital applications available and clearly understandable?

SYSTEM STANDARDS

- Are the digital applications of the City of Vienna safe and robust in operation?
- Are data privacy and data security already taken account of when designing an application? (privacy by design)
- Are user data protected by default? (privacy by default)

BALANCING PROS AND CONS

- Do digital solutions entail concrete added value for the citizens or municipal administration of Vienna?
- Are (potential) digital solutions tested for their resource efficiency before being deployed?

Legal notice

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