

# Digital Culture

Condensed version of the "Culture and Digitalisation" project



TA-SWISS, the Foundation for Technology Assessment and a centre for excellence of the Swiss Academies of Arts and Sciences, deals with the opportunities and risks of new technologies.

This condensed version is based on three scientific studies carried out on behalf of TA-SWISS by three different project teams from the Lucerne University of Applied Sciences and Arts, the Swiss Music Council and the Think & Do Tank Dezentrum. The condensed version presents the most important results and conclusions of the study in condensed form and is aimed at a broad audience.



## Kultur und Digitalisierung

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The content and findings can be viewed on a virtual platform on which an interactive space is dedicated to each of the three studies: [www.prooffofculture.ch](http://www.prooffofculture.ch)

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# Digitalisation – Servant and Conductor of Culture

## ■ Moritz Leuenberger

These studies form the final part of a trilogy focusing on technology-related changes in the democratic and federalist principles in Switzerland. Following the previous two studies (on media and opinion-forming, and on democracy and digitalisation), this third part deals with the influences of digitalisation on art and culture in Switzerland.

To structure the overall study multifariously, TA-SWISS entrusted three project groups that each had a different focus with the task of examining the impacts of digitalisation on the creation, distribution and reception of cultural works.

The **Lucerne University of Applied Sciences and Arts** describes how artists use digitalisation in the fields of music, theatre and design, how this changes their creative work, and which options for action subsequently arise.

The **Swiss Music Council** conducted a nationwide survey on the impacts of digitalisation on the music sector in Switzerland. The findings reveal the hopes and fears of the directly affected players and thus form the basis for political assessment.

The **Dezentrum** project focused on an analysis of the discourses on the NFT (non-fungible token) landscape. It presents a range of descriptions of digital art, and discussions with artists and experts, art collectors and dealers can be viewed on a digital web platform. This enables direct participation in the cultural-political dialogue on the issue.

In addition to their respective specific recommendations, the studies also encourage other deliberations:

Culture was, and always is, dependent on technologies, on analogue theatre stages or digital platforms. Like communicative transmission belts, they disseminate artists' interests, give them space and distance, and enable cultural messages to reach our eyes and ears.

Will the digital transformation simply be incorporated into a cultural development that has been ongoing for millennia, or will it give rise to a fundamental qualitative leap? In addition to new forms, will it also introduce other content onto the stage, and into literature and music? Will it fundamentally reshape the consumption of culture and thus give rise to another audience?

Digitalisation goes hand in hand with other social and political upheavals. It will not be easy to neatly untangle the tight knot of technology-related developments and others that are attributable to globalisation – for example, to medial oligopolies such as Spotify, Facebook or X – because the web of causes and consequences is too tightly woven.

The omnipresence in social media is forming new communities, for example on communication platforms. The global distribution of artistic creation is giving rise to expectations on artworks in terms of content and form, which are characterised by other cultural understandings. For example, the simultaneous visualisation of music and the expectation of shorter works are also influencing the content of creative output. This has consequences for the activities of cultural organisations in Switzerland, as well as for the way in which they are perceived, for example by choirs or brass bands, which embody cultural diversity and contribute towards our linguistic, regional and national identity.

Many cultural players are barely aware of these upheavals, and the less they are aware of them, the more they tend to perceive themselves as amateurs. They are often unable to make good use of the new technologies, and this lessens the importance of their work.

It is up to politicians, primarily in the cantons and municipalities – who in our view are responsible for fostering cultural diversity – to closely monitor such changes and ensure that cultural organisations are also able to perform their role for the community under the changing circumstances.

Artworks no longer have to be objectively and physically tangible, but rather can also (or even exclusively) be perceptible in a fictional world. Together with global and medial upheavals, such changes give rise to new legal dimensions, for example new forms of ownership of artworks (non-fungible tokens). New framework conditions for artists are being created. This has an impact on their social security and calls for new provisions in copyright, social insurance and labour law.

But all this is not solely attributable to digitalisation. Technological development goes hand in hand with socio-political, linguistic, economic and political changes. For example, professional cultural journalism is apparently declining and being replaced by spontaneous, not always carefully considered, reactions in social media or online journals, followed by storms of indignation or influencer marketing. Together with calls for cultural boycotts (cancel culture), this inflationary moralising has become an integral part of our culture. As a direct consequence of this, it appears that artists are increasingly specifying a single possible interpretation of a given work. Instead of encouraging independent further thought, opinions are being funnelled. This changes one of the genomes of culture: one characteristic of art is that it has to be explored, sensed, interpreted and

discussed. If merely one possible interpretation is imposed on us, this eliminates a significant element of art and culture, namely innuendo, ambiguity.

Digitalisation is influencing how we think and feel. It has become an indispensable servant of our culture, but at the same time has long since held the baton in its hand. To ensure that it does not become the sole conductor, we have to identify the associated opportunities and risks, and determine the tempo ourselves.

This is the main objective of the three studies.



*Moritz Leuenberger*

# Digital culture – a brief introduction

Digitalisation is changing and influencing the ways in which art is being created today, how it is being distributed and how it is being perceived by the recipients. Digital tools, artificial intelligence applications, online platforms and even the seamlessly accessible virtual space known as the metaverse, are opening up new opportunities for artists to communicate their creativity and make their works available to a global audience. Digitalisation is also changing the conditions under which they create their work and earn their living. While these digital metamorphoses in the culture sector are opening up opportunities, they are also associated with significant risks. With the increased “digitally driven” reach, the competition for attention is also taking on entirely new dimensions. And the use of generative artificial intelligence in the art world is raising the question of the role human performance, creativity and authenticity (in the sense of an individual, distinctive form of expression) will play in the future.

## Opportunities ...

- Digital tools can broaden and enhance the repertoire of conventional art forms. In some areas, the need for specific skills – for example, the ability to play an instrument or master a particular painting technique – is becoming of secondary importance. This means that, in principle, artistic creation is being opened to everyone who has access to the Internet, and culture is growing more diverse.
- Through the use of digital distribution channels, artists can bypass conventional intermediaries and established market structures, and directly reach out to a global audience or international collectors.
- In addition, niche products that are unable to find a sufficiently large public via analogue and regionally limited distribution channels can greatly increase their reach via digital channels.
- Digital platforms and virtual exhibitions are enabling more people to gain barrier-free access to art and culture at any time and from anywhere. Thus conventional (and in particular publicly financed) cultural organisations are increasingly evolving into macro-social entities.

## ... And risks

- With digital tools, art can be produced less expensively and with little need for specialised skills. However, digital affinity is required which not all artists possess. And the same applies with respect to access to the necessary digital resources. This situation could give rise to inequalities and exclusions.
- Artists often depend on a few major streaming and social media platforms that impose certain practices, such as generating content that attracts a high number of clicks. This means that new gatekeepers could take the place of conventional intermediaries and restrict artists’ creative independence and negotiating power. Moreover they are not sufficiently involved in the financial payouts.
- Under the conditions of digitalisation, the social and legal situation of many artists could become even more precarious than it already is.
- With respect to copyright law and the protection of personal rights, complex questions are arising – in particular in the context of AI generated works – that need to be clarified through legislation.

Opportunities as well as risks go hand in hand with the strengths of the digitalisation process, which is opening up and facilitating access, rendering processes more efficient, enabling the targeted use of resources and dispensing with the need for intermediaries in some contexts. But art and culture are not governed by this purely (financial) logic of efficiency. They are not simply a product, but rather are a running commentary on what is taking place around us. They also ensure that we remember the past and where we have come from. They hold a mirror up to us, question and provoke. They foster political and social dialogue, stand for social pluralism and integration. It is not without reason that, as merit goods – i.e. goods that are socially desirable but for which there is insufficient demand on the market – they have always been promoted by the state and patrons.

In this project, TA-SWISS set out to show how digitalisation is encroaching on this complex framework, and to find out where there is room for manoeuvre in order to structure the process so that it promotes cultural diversity and participation for everyone. Via

different paths, the three separate studies carried out within the scope of the project came to the same conclusion: it is only in combination with the strengths of the analogue world, its commitment, proximity and warmth, that the digital world can fully play out its advantages in favour of the creation of art and strengthen its social role. This conclusion gives rise to a variety of recommendations for action based on specific, already existing state processes and instruments.

## Urgent recommendations

The impacts of digitalisation on artistic creativity and the promotion of culture should be declared a long-term focal point of the National Culture Dialogue. Political decision-makers, cultural organisations and artists should actively support the development of digitalisation so that they can introduce any course corrections that may be required.

In the draft “Dispatch to Parliament Regarding the Promotion of Culture, 2025-2028”, the Federal Office of Culture should promptly address the proposed measures to ensure fair framework conditions in the digital environment in close cooperation with other federal authorities, and in particular with professional artists’ associations.

The Federal Act on Copyright and Related Rights was revised in 2019, but in view of the rapid developments in the field of artificial intelligence the process should be continually pursued at the political level in the same way as, for example, spatial planning.

To also create fair framework conditions in the digital environment, there is a need to implement a fundamental regulation of the atypical working conditions that arise due to digitalisation in the culture sector. In this context, the public authorities and private providers should closely examine the model of wage sponsorship (portage salarial) in a pilot trial.

Through targeted training and further education programmes, artists should be provided with the necessary know-how so that they can skilfully use digital production tools and distribution channels, understand the digital market mechanisms, be aware of the existing legal options and be able to defend themselves against copyright violations and unlawful exploitation of their work.

## Multi-faceted trilogy

The interdisciplinary TA-SWISS study on the impacts of digitalisation in the culture sector was divided into three complementary sub-projects, each of which examined various aspects of digitalisation on the basis of specific criteria.

- **Lucerne University of Applied Sciences and Arts** conducted a comprehensive study of the social, economic, political and legal impacts on music, theatre and visual design, based on research of the existing literature and several qualitative surveys and focus group workshops with artists.
- The qualitative analysis was supplemented by a quantitative study carried out by the **Swiss Music Council**, which illustrates the specific changes and challenges in the music sector. In addition, in two surveys it examined the extent to which the music sector in Switzerland is being affected by the ongoing digital developments, and how the sector is perceiving them and dealing with the evolving situation.
- In its discourse analysis, the **Dezentrum Think & Do Tank** examined the hype that has been triggered on the art market through the introduction of non-fungible tokens (NFTs). Here, NFTs serve as an example to illustrate how difficult it is to assess the potential of new digital technologies to bring about disruptive changes in the culture sector.



# Channels for art



**She is talented and full of ideas. As a classically trained guitarist she is a master of her craft, but she has no reservations when it comes to the use of digital technology: electro-musician Carla Buffi (28) from Bellinzona experiments with styles, instruments and computers. Her trademark, hip, unexpected crossover compositions, have already won her awards – though it's not yet enough for her to make a commercial breakthrough. To make ends meet she teaches part-time at a music school and composes jingles. The digital tools she uses for the latter purpose enrich her own creative work and enable her to fully control her production herself, as well as to market and distribute her creations independently of record labels. Carla is aware that through a targeted online presence she could broaden her reach and forge close ties with her community, or more intensively foster exchanges with other artists beyond national borders and cultures. But would this leave her enough time and energy to do what she really enjoys the most: compose music and perform in front of an audience?**



Carla Buffi does not in fact exist, but she certainly could: she is one of six fictitious artistic personas that have been inspired by reality – two each in the fields of music, theatre and visual design, with different degrees of digital affinity. Using these three typologies of artists developed on the basis of the specialised literature and discussions with experts, the study conducted by the Lucerne University of Applied Sciences and Arts shows how the diverse possibilities and challenges, and in particular the use of digital tools, can affect the artistic careers of these personas.

For the digitally smart Carla, digital production tools (such as Logic, Cubase, Ableton, Live, plus various virtual instruments and plug-ins) simplify her creative process. In order to market her music, digital distribution channels (for example, streaming services such as Vimeo and Spotify) play a significant role. Using these services makes it easier to reach the desired audience in that they cut “transaction costs” and reduce the associated workload. These “transaction costs” incorporate not only financial outlay, but also the necessary invested time and emotional effort. And this is where the ambivalence of digital tools now becomes apparent: Carla is not sure whether the time she has to spend managing digital communication tools (e-mails, chats, messenger services, etc.), and the stress that is associated with the management of various distribution channels (e.g. Instagram, TikTok), outweigh the price she has to pay for them. She finds she barely has time to concentrate on her music.

## Visiting the personas online as a pixel avatar

The project teams that examined the impacts of digitalisation on culture on behalf of TA-SWISS presented their studies not only in conventional form, but also online: the content and findings can be viewed on a virtual platform on which an interactive space is dedicated to each of the three studies. In the University of Lucerne section it is possible to slip into the skin of the personas and, based on multiple choice dialogues, to find out how the challenges that arise for them in the context of digitalisation affect their creative work. Web platform: [www.proofofculture.ch](http://www.proofofculture.ch)



## Art on all channels

Artists like Carla have a growing number of distribution channels at their disposal, including:

### Platforms

In the same way as the conventional marketplace in the analogue world, platforms bring together as many providers and consumers of different goods as possible at a common digital “location”. And as in the analogue world, this is not restricted to buying and selling. The good thing about markets is that people can see and compare the various goods on offer. For most artists, digital platforms are therefore primarily important as locations where they (and their works) can be discovered. However, the platform model can become problematic when streaming services are based on subscriptions: for musicians, the benefit of increased visibility and reach is all too frequently offset by low or zero income.

### Social media

Here, too, the focus is on signalling presence and building a bridge to millions of people throughout the world, rather than purely on generating revenue. But there is also a risk that artists could abandon their own quality standards in order to post click-bait. Furthermore, some artists speak of addictive behaviour resulting from the need to receive feedback on posts and subsequently respond to it.

### Non-fungible tokens (NFTs) and blockchain technology

Digital artworks that are freely accessible and can be copied free of charge are regarded as public goods. While this “something for nothing” culture can broaden the reach of a given work, it also deprives artists of revenue. This is where blockchain technology comes in: it makes otherwise freely copyable digital datasets unique (see next chapter for more detailed information). This is the basis of non-fungible tokens, which are of special interest for the art scene. Thanks to these digital authenticity certificates, artists can sell the rights to digital works without the need for intermediaries.

## Extended reality (XR) and metaverse

In the metaverse, extended reality (XR) and the real-world merge in a digital space in which people interact with each other as avatars in a virtual reality. In the fields of music and visual design, and above all the theatre, the metaverse is a genuine treasure trove of new artistic forms of expression. Interactions are possible over great geographic distances and reach a global and diverse public.

### Generative artificial intelligence

For artists, generative AI is evolving into a mixed blessing: while it can support and enhance their work, it can also compete with it. In addition, issues relating to copyright need to be clarified and there is considerable potential for criminal misuse and manipulation. A form of AI that is increasingly trained on AI-generated data could ultimately give rise to a standardisation and trivialisation of creative work.

## New economic models

The proliferation of distribution channels is creating new market mechanisms. Opinions are divided as to whether this will increase or restrict cultural diversity.

The long tail theory assumes that, in the age of the Internet, niche products will have greater market opportunities, while mass markets will lose their importance. The reason for this is simple: in the analogue world, a theatre cannot present a new play every evening, and record shops and galleries have to select their stock due to limited space and hope their clients find something to suit their taste. But digital distribution channels can handle an almost unlimited range of works – including “exotic” and rarely requested items – at low cost. Artists who would have little chance on the conventional markets can make use of specialised niches on the worldwide web. This long tail of successful niche products is also financially attractive for the distribution channels themselves. Through the sale of numerous niche products they can obtain higher profits than with the sale of a small number of mass-market products.

By contrast, other models assume that the focus of attention in digital distribution channels will be on a small number of “superstars”. Mechanisms such as scale and network effects in the platform economy, or “winner takes all” dynamics, could give rise to a situation in which the output of a few artists could go viral in a kind of self-reinforcing success

spiral and suppress everything else. Paradoxically, the almost infinite digitally globalised selection of artworks can have the same effect in that it could overwhelm the public to such an extent that people ultimately focus on a handful of major mainstream names instead.

## Mind and money

Artworks have more than just a market value: their social value exceeds their purely economic benefit. Artworks are cultural legacies and guarantors of social and political pluralism. They foster dialogue and critical reflection, and offer options. They contribute towards education, quality of life and the attractiveness of a community. In other words, artworks are merit goods, and as such they are supported and promoted by the public sector. Digital technologies open up new possibilities for promoting the appreciation of cultural goods and making them available to a broad public.

The study, **“Influence of digitalisation on music, theatre and visual design”**, conducted by the Lucerne University of Applied Sciences and Arts, examines the impacts of digitalisation on the framework conditions for artistic creation in the three cited fields, and identifies associated opportunities and risks. In addition to the findings presented in the relevant literature, the analysis was based on statements by artists and decision-makers in organisations and institutions that were received in the framework of interviews, focus groups and input from participants in a specialist conference (“culture | digital”, 2021). The analysis was supplemented with recommendations for action, the transferability of which to other cultural areas was validated within the framework of corresponding workshops. The recommendations refer to areas in which politicians, interest groups, economic and legal players should become active in order to co-determine the influence of digitalisation on artistic creation.

## NFTs: democratisation of art or investment vehicle?

**When Christie’s, one of the world’s leading auctioneers, sold a work by digital artist Beeple for 69 million dollars in 2021, the status of NFTs was elevated from a trendy niche phenomenon to a case for art history.**

In principle, there is no limit to the number of times digital art – created with the aid of computer technology, software codes, graphics editors, etc. – can be copied. This means it had a hard time on the established art market. But Beeple’s “Everydays: The First 5,000 Days” – a mosaic comprising 5,000 digital images that the artist had published every day since 2013 – is tied to a non-fungible token that is saved on a blockchain and can neither be exchanged nor modified. An NFT is a digital certificate that confirms the ownership of a virtual work and certifies that no other copy of the work exists. Each NFT is unique. Thus in combination with an NFT, digital artworks – for the sake of simplicity, referred to below as NFTs – become authenticated unique objects.

NFTs are closely linked with Web 3.0, with the ideal of a decentralised, transparent and fair Internet, in which gatekeepers and intermediaries no longer

exist. The aims of Web 3.0 are to replace the dominance of central platforms such as Google and Facebook through decentralisation, to uphold anonymity and participation, and to place the power over data and digital assets back in the hands of the users. In this respect, NFTs perform a central function in that they create “digital ownership”. Digital art can now no longer be copied without restriction, and instead can be owned, collected and exchanged.

### Art world in turmoil

It is this feature of NFTs that is causing turmoil in the art world. Because NFTs unambiguously certify ownership, artists can sell their works directly, i.e. without having to rely on intermediaries such as galleries, museums, art fairs, etc. And the fact that details of who bought which work and at what price is visible on the blockchain renders transactions transparent. Furthermore, smart contracts – self-executing contracts embedded in the code – also enable artists to profit from subsequent sales and thus to improve their financial circumstances.

NFT art is globally accessible via the Internet, and is thus democratic. In principle, anyone who has an Internet connection can create or acquire an NFT. Instead of galleries, art fairs and museums, Internet platforms and social media become the locations where artists can interact with prospective buyers or fans, and where a substantial ecosystem of communities and sub-communities evolves, which also play a major role with respect to the valuation and classification of artworks. Thus, value creation is no longer determined and controlled solely by the conventional central bodies, but is negotiated within the community with the participation of many. This represents a shift in the power structure, and the art market (potentially) becomes fairer.

### Expression of a change in culture

Smart contracts facilitate other forms of interactivity. Thanks to their programmability, NFTs become dynamic objects that interact with their environment, for example in that they respond in real time to lighting conditions in the physical world, or self-destruct if they remain in the possession of the same person for longer than a specified time. This dynamic opens up new scope for a critical analysis of what art is and what it should be, and for concepts such as value and ownership. In this way, NFTs are thus becoming the medium of our increasingly digitalised reality, and the manifestation of a cultural shift.

However, even on the NFT market, fairness and inclusion cannot be taken for granted. In principle, an end device and Internet connection are sufficient for offering, viewing, selling or buying NFTs. But artists have to call on substantial resources in order to gain the necessary visibility of their works on digital marketplaces such as OpenSea, Rarible and Foundation, or on communication platforms such as Discord and X (formerly Twitter). The production and trading of NFTs also require considerable technological skills on the part of both the providers and the interested parties, and transaction costs can often be high. Finally, because of the digital divide not everyone can participate equally in the NFT market.

### Who determines what art is?

Recognition by players such as Christie's, art fairs (e.g. Art Basel) and museums such as Centre Pompidou in Paris confer relevance on NFTs. They are the topic of the official discourse on art. But this goes hand in hand with the risk that the conventional art world could also subject the prerogative of interpretation, as well as access to NFTs and their distribution, to its own rules. Furthermore, record prices such as the 69 million US dollars attained by Beeple have attracted players more interested in investment than in net art. By creating digital ownership and thus introducing the principle of scarcity into the digital space, NFTs have become objects of speculation, whose artistic and social value is determined by the logic and fluctuations of the financial markets.

The study, **"Proof of Culture: NFTs in the art world – a discourse analysis"**, conducted by Dezentrum examines how NFTs are changing the network of relations between artists, art institutions and the general public – and how the questioned experts view the promises of democratisation and decentralisation of the art market associated with NFT technology. For this purpose, it documents a broad variety of opinions and stances based on a review of the relevant literature, on semi-structured interviews with representatives of the art and crypto scenes, and on statements and views from focus groups and discussions. Together with the classification and comparison of the various assessments, the findings were incorporated into a multimedia publication. Here, interested parties can immerse themselves as pixel figures in the digital world of NFTs, and explore their facets in interaction with objects and (if they are willing to open their microphone and camera) with other users. They also have the option of downloading the publication as a PDF and perusing it in text form on screen or as a printed document.



# Unusual relationships



**Carolin Hasler (28) is a qualified mediamatician and lives in shared accommodation in Thalwil. She works part-time (60 percent) for an insurance company, but her passions are photography and graphic design. She is skilled in the use of various digital tools for video production and is an Adobe superuser. She also finds AI tools cool, but isn't sure whether she wants to use them extensively, because the legal situation regarding the use of AI-generated images is unclear. How great is the risk of violating other people's copyright with this technology? Would she even be the owner of a work that she has created using such tools? There are also other aspects of AI that have to be considered: if everyone who has access to a computer and the Internet can create artworks, how can she still stand out from the crowd? For her, the only solution is to more intensively look after her relationships with her manageable but growing fan base, and this has already resulted in the award of several commissions. On the other hand, she has to withstand the stress of being permanently present on these channels. Then there is the pressure of not missing any trends: does she now have to start minting NFTs, i.e. convert her digital works into crypto collectibles? And how does that even work?**

## Different "digital time zones"

The digital transformation is having different impacts in the various fields of art and culture. In visual design and music, digital production technologies and distribution channels are almost indispensable, and mastering the various digital skills is a matter of course. But in the theatre the situation is different. As before, the main focus here is on local performance and direct contact with the audience. Production tools such as video installations, virtual reality (VR), augmented reality (AR) or distribution methods such as streaming are only used hesitantly, and are also perceived as an additional burden in view of the high technological demands and the required financial resources. Audiences, as well as funding bodies, also prefer conventional forms of performance. The fact that artists operate in different "time zones" and the process of acquiring skills in the new technologies often lags behind their development, is also evidenced in the differing degrees of acceptance and use of social media platforms. For many artists, social media presence is a means of customer management that they dutifully use because there is no way around it.

## New scope for social reflection

Digital technologies create new experiential spaces and scope for social reflection, which traditional media cannot offer. For example, VR and AR in exhibitions and theatre productions involve the audience in an entirely new way, and can thus facilitate a more intensive engagement with the addressed topics. Online platforms and virtual galleries also lend themselves to innovative cooperation projects between art disciplines, ideas and techniques that can reach out to target groups that do not have access to conventional art institutions. This promotes cultural diversity and the exchange between different art scenes. In all fields of artistic activity, however, the fact is emphasised that digital tools cannot entirely replace physical encounters – and that, as before, art as a counterweight to the tendency of digitalisation towards acceleration and volatility needs physical formats, both for exchanges among artists, as well as for the relationship with the audience.

## Separation of art from craft

Does a pop musician still have to be able to play an instrument today, or a graphic artist need to be able to draw particularly well? In some areas of music and visual design a tendency can be observed for craftsmanship to be pushed into the background. With digital tools and technologies, it is possible to create “presentable” works without possessing the traditional skills and with relatively little effort. This broadens the access opportunities, which especially in the field of visual design has reawakened the debate on what art is, and what it isn't. The differentiation from uniform products – created with the same production tools – also becomes a challenge in the digital space. For many professional musicians who have been able to keep their heads above water financially thanks to the production of web jingles, there is a risk of losing a source of revenue if “less demanding advertising music” is now possible through AI prompting. In some areas of music, this development had led to a reinterpretation of professionalism. It is no longer measured by (digitally performed) artistic virtuosity, but rather by the intensity and perseverance with which a project is worked on.

On the other hand, digitalisation is giving rise to a revitalisation of the arts by bringing forth new creative forms of expression and thus expanding the boundaries of what is possible. The focus is shifting towards new creative skills. With AI-generated output, for example, it becomes essential to master the formulation of good prompts, and in the theatre to acquire technical expertise for the implementation of complex stage settings. Digital skills are also essential to reduce in-house production costs.

The fact that mastering artistic skills is being pushed into the background is democratising access to art production. Digital tools and technologies are often less costly than conventional art materials and techniques. This means that more people can create and share art – largely irrespective of their background or resources. This results in greater diversity in the art world thanks to the inclusion of new voices and perspectives. In contrast, there are concerns that this could give rise to a devaluation of artworks if technological tools push craftsmanship and human creativity into the background.

## Impacts of do-it-yourself practices

In music, visual design and the theatre scene, digitalisation means that artists are carrying out many tasks themselves that are closely tied to their work, ranging from production, processing and distribution of their creations through to marketing and management of their online presence. For artists, do-it-yourself practices enable greater autonomy and control over their own work, but they are also associated with a heavier workload and increased stress.

Carolyn Hasler manages all aspects of her work as well. She takes photographs, creates graphics and processes them. She handles her Internet presence and carries out marketing in order to acquire new customers. These multifaceted tasks require a broad range of skills. To a certain extent, artists now have to operate as entrepreneurs and familiarise themselves with business strategies, market mechanisms and customer management.

## From old to new

Digitalisation is changing the importance of conventional gatekeepers such as record shops and galleries, and new ones are now taking their place. Streaming services such as Spotify and Apple Music, and digital marketplaces such as Amazon, have become indispensable for the distribution of music, as have social media such as TikTok and Instagram for customer/audience management. But all these platforms have their own business models and algorithms, to which artists have to adapt their content in order to be visible, meet their public's expectations and be successful. If they lower their own standards in order to do this, the quality of their work may suffer. Digital marketplaces (Etsy, eBay, etc.) are another example: these offer artists the possibility of selling their works directly to their customers without the need for intermediaries, but at the same time charges apply, which can influence their margins. Thus new power asymmetries and dependencies coming into play along the monetary value chain can restrict artistic freedom.

# It's the tone that makes the music

**The majority of Swiss musicians tend to display a positive attitude towards digitalisation. They appreciate digital technologies, especially conference tools, digital instruments, social media, streaming and ticketing services, and frequently use them. Generally speaking, people active in the music sector are prepared to acquire the necessary skills for using digital tools, but they do not immediately pounce on every technological innovation. For example, they follow the development of AI applications and blockchain technologies with interest, but rarely utilise AI tools.**

At first glance, this pragmatism may appear surprising. Today, music can be composed, produced and sold automatically and (almost) without human intervention. Thanks to streaming services and mobile playback devices, music has become an unlimited and constantly available commodity. Nonetheless, in the view of more than a quarter of the musicians and almost two-fifths of the organisations, digitalisation primarily opens up opportunities, while less than 10 percent emphasise the risks, and the remainder place opportunities and risks on an equal footing. There are of course differences within the music sector: federations, associations and amateurs, young (male rather than female) musicians and those active in popular music genres and commercial music production express greater optimism than older musicians, companies, public-

law bodies and foundations. Professional musicians who find it difficult to earn a reasonable living with their music are especially pessimistic.

## Digital assistants

One aspect of digital technologies that is especially appreciated is the fact that they simplify and reduce the costs of many music creation, distribution and reception processes, and open up new possibilities. Conference tools, for example, facilitate exchanges and cooperation between musicians; notation software assists with composition and arrangement; electronic instruments are equipped with functions that automatically underlay melodies with harmonies; an "autotune" function corrects pitch errors; and entire songs can be automatically composed, arranged and recorded with the aid of AI – thus making complex and costly studio recording a thing of the past. These possibilities are primarily utilised by young musicians, professional musicians and those active in the fields of pop, rock, soul and jazz. Streaming services and social media channels are used for the distribution of music and have partially taken over the function of the music press, thus enabling musicians to address their fans directly. Streaming platforms also play a central role with respect to reception: listeners can stream their favourite music at any time and from anywhere, and can even watch concerts at home thanks to live-streaming services.



The new digital tools have democratised the process of making, sharing and listening to music: 53 percent of the respondents are of the opinion that it is becoming easier for the socially disadvantaged and persons with disabilities to participate in the music scene. But there are also areas in which digitalisation is problematic. In view of the new listening habits and the omnipresence of streaming services, sales of physical recording media have fallen sharply, and this places the fair compensation of performance in question. Furthermore, in view of global competition it is becoming more difficult to be perceived by the media at all, especially because the visibility of Swiss music on the international streaming platforms is very low. For professional musicians with precarious earnings capacity, this development is associated with considerable financial disadvantages. Concerns also exist regarding data protection and copyright, particularly in the context of the use of generative AI.

### Sunny, but partly cloudy

Because the impacts of digitalisation in the music sector are perceived with moderate optimism, the majority of the questioned organisations do not see any immediate need for action. Opinions differ, however, with regard to the assessment of the longer-term perspectives. In the view of 34 percent of the respondents, the music world will become more diverse as a consequence of the impending changes, while 29 percent are of the opposite view. A majority assume that music teaching will come under increasing pressure and ever fewer children will learn to play an instrument in the future. The assessment of the future of amateur associations/clubs, which are currently a central pillar of Swiss music, is also pessimistic. However, the decline in membership of such bodies may have less to do with digitalisation than with the decreasing importance of clubs and societies in Switzerland and the fact that traditional music formations are generally becoming less appealing to young people today.

On the whole, Swiss musicians believe that life could become more difficult for them. And across all levels and groups, around one-fifth of the respondents declare that they feel (more or less) overwhelmed by digital technologies. But on one point they remain confident: they firmly believe that live music and the social aspect of “analogue” music will retain their importance in cultural life – perhaps even as an counterbalance to the process of digitalisation in other areas.

On the basis of a quantitative data survey, the study, **“Opportunities, Risks and Impacts of Digitalisation in the Music Sector”**, carried out by the Swiss Music Council (SMC), examines how musicians and organisations active in the music sector assess the impacts of digitalisation on their own activities and on music in general. Between May and August 2023, the SMC (the umbrella organisation of the music sector in Switzerland) consulted more than 1,000 professional and amateur musicians, music teachers, clubs, associations, concert organisers and music schools, plus 250 organisations operating in the music sector, by means of an online survey. The participants were asked for their views on the benefits of digital technologies, the level of perception of digitalisation and the long-term perspectives for the music sector. The study yielded representative statements concerning the perception of the impacts of digitalisation on various groups and organisations in the music sector, and identified specific needs and challenges from which it derived targeted measures to support and accompany digitalisation in the music sector.



# New networks at the interface between art and IT



**For André Lescouret (38) from Lausanne, acting is a passion. He has been a member of the permanent municipal theatre ensemble for many years, but has also made a name for himself as a freelance actor and speaker – including at the national level thanks to his receipt of several awards. His personal success means a great deal to him, but he’s equally keen to pass on his passion in coaching courses to up-and-coming actors. As an instructor he does not shy away from digital tools. In its next project, a Molière play, his young troupe wants to directly involve the audience into the performance via digital interfaces. For André Lescouret this is a considerable challenge, but luckily his personal network efficiently complements his professional skills. The computer wizards among his friends are sure to offer him advice for his “Molière as if you were there!” project. It’s just a shame that the school administration has mixed feelings about this experiment.**

The potentials of digital networking are changing the way in which artists and others active in the culture sector work together and interconnect. New types of networks are also evolving between artists and prospective clients and the (potential) global audience. These new networks require intensive social media management, which on the one hand gives rise to greater independence from conventional intermediaries (e.g. marketing and communication agencies), but on the other can lead to an additional time-related burden or even an excessive workload.

Precisely in Switzerland’s relatively small culture sector, where already during analogue times a tendency towards informal connections and temporary project cooperation existed, a greatly individualised, informal network structure is now evolving. This is enabling colleagues to exchange information, cooperate, learn from one another (for example, through tutorials and courses) and realise joint projects, beyond geographic areas and discipline boundaries. In addition, contacts with cultural institutions and funding bodies are also increasingly taking place via digital channels. Those who know how to use these tools competently are able to gain access to new contracts and sources of income.

Networking enables artists – again, with considerable effort – to market and sell their works directly, without the need for intermediate institutions and in principle worldwide, without depending on professional agencies or contracts with established distribution channels. This do-it-yourself mentality is also reflected in the networks, where communication and relationship management take place via organisational software, messenger groups and social media. Because the most efficient tools are often only available as commercial software, many freelance artists have to turn to the use of free software and/or free versions with greatly restricted capacity.





## No benefits at zero cost

Precisely in view of the high demands in terms of skills and resources that it places on artists, as well as on organisations and informal networks, digital communication is critically questioned in some cultural fields. This especially applies to the performing arts (theatre and music), because here artistic work is fundamentally interpreted on the basis of the direct interaction between the people in attendance. And this is also precisely where it becomes apparent that integrating the audience with the aid of digital tools and blurring the boundaries between producers and consumers requires a great deal of effort, as well as personnel and financial resources. The promise that digitalisation will go hand in hand with increased participation and democratisation cannot be fulfilled at zero cost.

Managing the interface with the audience is also a demanding task. Here, the requirements of the digital medium itself have to be taken into account, as well as skilfully meeting the expectations of a changing audience. Digital presence on its own cannot suffice to secure a box seat for artists and their works in the closely courted attention economy, or to attain visibility for a specific event such as a vernissage, concert or theatre premiere. Social media channels contain other pitfalls: artists have to strike a balance between the self-presentation these channels require and promote in order to capture the attention of the users, and at the same time the need to demonstrate their artistic individuality and social relevance. The public sector, on which they rely for funding, expects them to strongly advocate cultural participation, inclusion and social cohesion. Thus they navigate in the field of conflict between the preservation of artistic content and the facilitation of access – between exclusivity and excessive trivialisation.



## Social relationships as alternative

Even though digital networks are becoming increasingly important, there are still physical platforms for professional interaction in conventional presence formats such as music festivals and artists' exchanges. These facilitate encounters between artists, sponsors, critics and fans that digital platforms can only simulate, despite technical sophistication. The mesh of relationships in digital networks, which forms and dissolves on a project-related basis, also means that the artists are constantly on their own. In addition, there is the isolation due to the many works steps in which cooperation with others has been replaced by a "do-it-yourself" approach. All of this leads to the need to deliberately maintain personal relationships with colleagues, the audience and cultural players in the analogue world, and to reserve the use of digital channels for the pure exchange of information.

In the Swiss culture sector, there is now even a tendency towards a return to more regionally or locally oriented production in order to offset the instability of relationships in purely digital networks. The small-scale nature of the Swiss culture sector is also favouring this trend. In addition, with the exception of the special programmes of Pro Helvetia and its branch offices, the federalist public cultural funding is also largely tied to commissions in Switzerland and on domestic markets.



# Legal dimensions of digitalisation in the culture sector

**An ever-growing number of artists are active in atypical working relationships: the majority of them – 60 percent in the German-speaking region, and 45 percent in the French-speaking region – are self-employed, have frequently changing clients or employers and work part-time for several companies. They move from one short-term engagement to another and often accept non-related jobs in order to make ends meet. Despite numerous efforts on the part of the public authorities, foundations and professional associations, in the past two decades social security has only improved in a few areas, most notably theatre, film and audiovision. According to a study carried out by the Swiss cultural foundation, Pro Helvetia, more than 50 percent of artists live in precarious circumstances and are inadequately insured against accident, sickness and loss of income, and ultimately face old-age poverty. One-third of self-employed persons in the culture sector do not have pension provision.**

## Digitalisation intensifies the precarious situation

Social insurance schemes are insufficiently oriented on artists' income situation. In contrast with other European countries, there are no specific provisions in Switzerland's legislation that apply to artists. Under the conditions resulting from digitalisation, their situation is likely to worsen further, and issues relating to employment and social insurance consequences will grow more complex with the emergence of digital platforms and the increase in reach and competition on (international) digital markets.

However, the fact that digitalisation is also shaking up other areas of the working environment could have a positive effect. With the rise of the platform economy and its flexible, time- and location-independent employment models, the issue of social insurance cover for those in atypical working relationships will become more pressing and receive greater attention at the political level. The model of wage sponsorship (portage salarial) developed in France is already under discussion. Here, a corporate sponsor intervenes as an intermediary between self-employed persons and their clients and thus acts as an employer. In this way, remuneration is

turned into salary, and freelancers obtain the security of an employment relationship so that they are insured against unemployment, registered with the mandatory occupational benefit plan and covered by the statutory accident insurance scheme.

## Artificial intelligence versus copyright law

In the digital era it has become more difficult to determine who has access to an artwork or distribution channel, and who does not: the exclusion principle can only be regulated with the aid of additional tools, for example paywalls, or is even not enforceable at all. Without such barriers, copyright provisions and licence fees can be easily ignored. But copyright violations also usually mean that artists are deprived of appropriate remuneration for their works.

And now artificial intelligence is coming into play. In 2023, script writers and actors joined forces to protest for many months outside the major Hollywood studios. This strike, which was one of the longest in the history of the American film industry, illustrated the anxiety that generative artificial intelligence is awakening in the performing arts sector, namely that authors and actors, singers, dancers and musicians could be pushed out of the labour market by their own digital alter egos.

In Switzerland too, the rapid progress of AI is being monitored with concern, especially due to new and as yet unsolved problems relating to the protection of copyright and personal rights. These concerns have prompted the Federal Council to request the Federal Department of the Environment, Transport, Energy and Communications (DETEC) to compile an overview of potential options for regulating artificial intelligence, and submit its report by the end of 2024.

## Copying will continue as long as it remains possible to do so

Copyright problems arise, for example, when in the areas of music and visual design, works and images are used against the artists' wishes for the purpose of training AI for the realisation of AI projects. The Swiss culture scene is keeping a close eye on the

lawsuit brought against OpenAI and Microsoft by the New York Times at the end of 2023. In Switzerland, artists have the possibility of defending themselves under civil law against exploitation of their work, but in most cases this only applies in theory: civil lawsuits are costly and as a rule are therefore generally not a viable option for creative artists.

Questions also arise, however, when artists in their turn use AI for their work. Here it is not clear whether users can be held responsible (as stipulated in the terms and conditions of use) if they violate the rights of third parties through the use of AI-generated content. Similarly, the question whether any rights to AI-generated content can exist at all,

and if so who owns them and thus who can assign them to someone else, also needs to be clarified.

Even NFTs are not convincing from a legal perspective, despite their presumed status as “digital assets”. Because they are recorded on a blockchain, they at best function as “certificates with a higher degree of authenticity”. But until such time as the necessary technology exists that is capable of securing an original digital artwork so that it can no longer be copied, from both a practical and a legal point of view it makes little sense to buy/sell the ownership of such a work. From a legal perspective, licensing would be the sole option.

## Digitalisation in the culture sector is what we make of it: some recommendations

**Digitalisation is penetrating the whole of society, including the art and culture sectors, which are having to adapt to the changing circumstances. The various tools, as well as organisational structures, processes, products and services – and not least, the form and content of artistic and cultural work, and even the fundamental definition of what art and culture are and which roles they can and should play in society – are all being affected by the digitalisation process.**

In order to ensure that the digital transformation will be co-determined and not simply endured, a strategic approach is of great importance. This has to take account of the essence of art and culture and bring it into line with the expectations, needs and consumer habits of the digital age. In other words, digitalisation is what the involved players proactively make of it. It is in this sense that the recommendations resulting from the studies conducted by the Lucerne University of Applied Arts and Sciences and the Swiss Music Council should be understood, a selection of which are presented below.

### Digitalisation should become the centre of attention

The enormous impacts of digitalisation on the culture sector and the promotion of art and culture should become a long-term centre of focus of the National Culture Dialogue, in the framework of which the federal government, cantons, agglom-

erations and municipalities should jointly analyse the current cultural-political challenges and – while preserving cantonal sovereignty – formulate harmonised measures. Here, reference can be made to the 2005 UNESCO Convention on the Diversity of Cultural Expressions that was ratified by Switzerland and which addresses the topic of impacts of the digital transformation.

### Fair income conditions

In cooperation with other relevant federal authorities and cultural associations, the Federal Office of Culture should rapidly implement the proposed measures cited in the draft “Dispatch to Parliament Regarding the Promotion of Culture, 2025-2028” to ensure “fair framework conditions in the digital environment”.

The atypical working conditions that are evolving as a consequence of digitalisation and are in particular being driven by the platform economy, including in many professions outside the culture sector, need to be regulated. In this context, public authorities and private providers should examine the wage sponsorship model (“portage salarial”) in a pilot trial and more closely identify its possibilities.

## Education programmes

Targeted training and education programmes should help artists utilise the potential of digital production, distribution and communication tools for their work. Courses should focus on practical skills regarding the use of various tools and platforms, as well as on familiarity with the mechanisms of digital markets and the impacts of new developments such as NFTs.

Training and further education programmes should also deal with the labour law and social insurance issues that apply to the specific situation of self-employed persons. This calls for a coordinated procedure on the part of the cultural associations, which the federal government could specifically promote through service level agreements.

Cultural associations should provide low-threshold information and support services so that artists understand the legal options for defending themselves against copyright violations and exploitation of their work.

## Amendments to legal provisions

The Federal Act on Copyright and Related Rights was revised in 2019, but in view of the rapid developments in the field of artificial intelligence, the process should be continually pursued at the political level in the same way as, for example, spatial planning. Here, the relevant associations should play a major role.

Digitalisation is a global phenomenon. For a country like Switzerland, which is highly integrated into the European market, the ongoing intensive regulatory activity in the EU in the area of digitalisation (and the field of AI in particular) is groundbreaking. Legislative amendments should be effected in step (or at least in coordination) with the EU. Here it is important to always examine whether the existing legislation can also be applied to new technological developments in keeping with the principle of technology neutrality.

Currently, artists whose works are used for AI-generated products without their consent can only defend themselves under civil law – with the associated uncertain prospects of success and the risk of high legal costs. Here the creation of a criminal offence in the event of violation of personal rights through the use of AI could provide them with an effective instrument for enforcing their rights.

## Cultural diversity

Only a handful of Swiss artists succeed in becoming international “superstars” on digital platforms. The strategy of developing a niche for distinctive creativity and standing out from the crowd thanks to diligently established authenticity is more promising. Art promotion can support this by recognising art and culture as a merit good and by fostering art projects that have no prospect of immediate commercial success.

Amateur clubs, and in particular music societies, should be specifically promoted as important building blocks of Swiss culture. Here, the systematic monitoring of their development would be helpful, together with financial support from the federal government, cantons and municipalities. A fixed contribution based on the number of members could prompt these clubs and associations to actively take steps to counter declining membership. Professional and umbrella associations should support them in the use of digital tools so that they can make their offerings more contemporary and attractive.

In the view of many musicians, music education as an important form of culture and cultural practice has come under pressure: they fear that ever fewer children and youths will learn to play a musical instrument in the future. To counteract this, music teachers should be trained to respond competently to new developments in the digital music world (and to include digital tools for this purpose). Professional and umbrella associations, as well as music academies, should introduce the necessary further education programmes.

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