

Estonia's digital culture manifesto¹

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2020 was a pandemic year worldwide. In Estonia, it was also declared the Year of Digital Culture, by the Ministry of Culture. The synergy between the two was unexpected, but significant: the pandemic highlighted both the importance of digital culture and the shortcomings in its organization and accessibility, and more broadly, the shortcomings in sectoral policy-making. Estonia may be a 'digital state', but our strengths lie first and foremost in public e-government services and in the infrastructure that has been created for this purpose. We have plans to digitize our cultural heritage, but lack clear goals and actions to make culture more widely accessible through digital channels, in order to create new opportunities for participatory culture and to support the creation of innovative digital art forms that would enrich our meaning ecologies.

At the same time, it is clear that most online interactions are about cultural content and that new digital technologies are being deployed primarily for more efficient consumption of creative works. For decades, researchers have shown how the creation of new technologies is shaped and driven by people's search for meaning and their everyday cultural practices. This is why Estonia needs a digital cultural policy that goes beyond both - classical cultural policy and conventional economic policy. We need an innovation policy that is attentive to culture but also technologically informed, and that sees the interconnections between culture and technology and integrates them into one whole. In moving towards this goal, we've articulated a 12-point manifesto – one statement for each month of the year of digital culture.

Contemporary digital culture is driven by a process of **platformization**. Digital platforms (such as Facebook, Netflix, and Amazon, as well as various app stores) play a central role in 21st-century meaning-making, participatory culture, and creative industries. In this context, the concentration of platform power in the hands of a few large multinational corporations is making survival increasingly difficult for local creative industries. Platform power creates infrastructures and markets that undermine competition and operate on opaque terms. At least four aspects become relevant for ensuring the sustainability and autonomy of Estonian (digital) culture. First, Estonian digital culture policy needs to become better aware of the mechanisms and consequences of platformization. Second, Estonia needs to systematically and strategically contribute to EU legislation aimed at regulating platforms. Third, Estonian public services – in particular, the services of public cultural and educational institutions – need to be developed as platform-aware: as a modular, interconnected, and

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mutually empowering network of services, easily and freely accessible to all Estonian inhabitants and institutions. And finally, we need to systematically look for ways to decentralize internet infrastructures and services in Estonia.

Digitizing culture means its **datafication**. Cultural heritage, contemporary content creation, and people's everyday participatory practices – from commenting on social media to buying a book or a record in a shop – are all datafied. While cultural heritage is mostly datafied by public means, contemporary cultural content is often born digital. Yet, both types of content are generally distributed on major global platforms. Publicly generated cultural content, along with its metadata and de-identified information on cultural practices, need to be as widely available as open data. in order to enable new content creation and cultural analytics. At the same time, caution must be exercised when using cultural data, for example, for cultural policy-making. Culture comprises a complex system of meanings, but the aggregated data are most always simplified. Despite that, it is very important for the self-reflective capabilities of Estonian culture that the various cultural data and metadata corpora are (ethically and mindfully of risks) transformed into linked data and interconnected. This will create an opportunity to study the development of Estonian culture using new methods (e.g. network science), and through that, to arrive at new evidence-based cultural services (e.g. the presentation of the complex links within Estonian culture and society, which could inspire new creative works, new media formats and new cultural policy). Owing to their scale and the network effects they exploit, large-scale platforms offer advantages in capturing the cultural practices of any population and in the commercialization of the data collected. At the same time, they do not contribute much in terms of the creation of cultural value, which means it is justified to limit their data collection rights to empower citizens and cultural creators to control the use of the data platforms collected about them, and their creative work. Increasingly, this discourse converges around the notion of 'data justice'.

Data justice means developing, analyzing, and regulating data collection based on whether it increases fairness and equality in society, i.e. whether people and groups are treated fairly when decisions are made based on data collected, commodified, and categorized in relation to their activities. This concern stems from an observation that acting only based on efficiency (e.g. by creating recommendation, categorization or search algorithms), without explicitly thinking about fairness, often leads to biased thinking and reproduces and exacerbates existing social injustices. On the one hand, data justice needs to constitute a broader core value of digital culture. On the other, only data-cultural governance policies need to be promoted, e.g. when datafying cultural heritage or opening up cultural data, or developing and implementing machine learning models to analyse such data. This implies that the development, research and regulation of technologies involved in digital culture should always rely on principles of data justice, where data are treated as a public good and value. As we are all both data donors and individuals affected by datafication, the only fair system of data relations is one that benefits everyone and creates common goods.

Estonian cultural policy needs to prioritise making cultural content and services widely and easily **accessible** across the country; thus it needs to prioritise digitization. Copyright agreements must ensure that authors and contributing private institutions are rewarded fairly for their work. At the same time, it is important that publicly funded culture reaches the wider population in a reasonable and convenient way through digital channels.

Thus, the wider uptake of open-access licences needs to be incentivised – and ways to motivate authors to make their works freely available sought. In addition to ensuring access to cultural content, it is important that the re-use of creative works for re-creation – remixes and other new contexts and forms – becomes easier than it is today. This is important because new meaning and new cultural forms always derive from older ones, and creating the necessary conditions for novel uses of local cultural content is directly linked to ensuring the viability and development of Estonian culture.

The development of digital culture enables new multimodal, interactive, participatory and gamified learning tools that make learning more attractive and effective, and is thus at the heart of the **renewal of the education system**. Developing digital learning systems in Estonia has gotten off to a good start, but ensuring that there is enough diverse and modern learning material written in Estonian that is relevant to Estonia's own culture remains a challenge. Research shows that multimodal learning is more effective than single-mode learning, so educational content needs to form cross-media ensembles. Contemporary forms of active learning presume participatory and co-creative educational services. And while novel methods of datafied learning and study analytics support effective teaching, we have to be mindful of data related to learning moving to large platforms. The datafication and platformization of the Estonian education system needs to happen with the support of Estonian institutions and in a form that provides a public good. Presuming that cultural practices drive technological developments and innovation, it is important to more effectively integrate arts and technology teaching. Estonia's youth need to be given an opportunity to grow up as creative, critically aware, tech-savvy citizens, who are capable of value-driven shaping of technology for a better future.

Digital culture is global and prone to consolidation, which is why **empowering the local digital cultural industry** is crucial to supporting Estonian culture. More systematic investment of public funds is needed in the development of screen-based media formats and the institutions that produce them – from drama series to the games industry. There are many examples from around the world, including from small countries, where years of systematic development and public commissioning of innovative cultural forms from independent producers have led to internationally successful local audiovisual or games sectors. The more successful our cultural industries are internationally, and the stronger their economic foothold, the more they enrich local culture with new forms and meanings, and the more confident the Estonian creators are in creating a new Estonian (digital) culture. In order to achieve this, Estonia needs to explicitly involve digital culture in the development of the national innovation system and a more concrete industrial policy on digital culture. The development of digital content needs to be an economic policy priority, supported by investment in relevant R&D along with cluster and incubation measures, as well as outsourcing policies. To this end, a separate innovation system must be developed, where public and private institutions collaborate and create synergies.

In addition to the development of a digital cultural industry, it is also important to develop **support for digital arts**. Estonian culture is influenced daily by new interactive and participatory forms of expression – from content on video platforms and social media to hypertextual literature, video games, and virtual & augmented reality applications. At the same time, the administrative division of Estonian cultural policy into clear-cut creative fields

is based on outdated 20th-century concepts. Most new forms of artistic expression are neglected by cultural policy, and as our own support systems do not regularly and visibly support the creation of such works, Estonian people mostly consume digital art from elsewhere. Therefore, Estonia needs a much more proactive digital arts development policy – we need increased attention from the Ministry of Culture and support institutions with their own budgets – i.e. an arts development centre, which could focus on supporting the development of multimodal, interactive and participatory forms of culture and where expertise could be concentrated over time.

In Estonian cultural policy, the digital age has meant, above all, **digitizing heritage**. This is certainly a very important area, yet the achievements so far lag behind the plans and user needs. The current pledge to digitise one third of all cultural heritage by 2023 is certainly an excellent goal, but our ambition could be higher. This is particularly true for printed heritage, where the technical capacity would certainly allow digitization of more than the 3.5 million pages planned so far. But no less important than mass digitization is what will be done with the digitised data – where it will be stored, how it will be made available and how it will be used. There is very little public debate on this so far. For a small country like Estonia, the optimal solution would be to have one central platform for digital cultural heritage, rather than to build competing platforms (as has already happened with print heritage, where two platforms – ETERA and DIGAR – are being concurrently developed). In addition, it is important that heritage content and its metadata are shared as widely as possible as open data, enabling stakeholders to develop more specific services. Building on this potential, it must be acknowledged that Estonia still lacks both: an action plan and the capacity to analyse digitised cultural data.

One of the hallmarks of the digital age is the ever-increasing amount of data, which makes it increasingly difficult to store. As much of today's cultural creation is born digital, storing it for future generations is an increasingly urgent task. At the moment, we are not doing a very good job of this, even within Estonia, although the National Library's online archive and the National Archives' digital archive have done their best to archive Estonian-language websites and digital documents to some extent. However, an even more difficult question is what will become of the cultural creation of Estonians that is published on international digital platforms (YouTube videos, blog posts, participatory cultural content created by politicians, artists, trendsetters and everyday users, etc.). Estonia needs a long-term **digital archiving strategy** to ensure that information born digital is preserved in a sustainable and user-friendly way.

The development of the Estonian language no longer depends on whether we can curb the take-up of English in Estonia, but on whether we can provide Estonians with sufficient technological support to keep up with major languages. The decline of the Estonian language will not result from lack of mandated learning, but from its loss of prestige and usability in the digital world. The digital age is, in fact, a rare opportunity to make the Estonian language big, to give it all the opportunities that the great world languages have. Much has already been achieved along this path, thanks to the initiative of researchers, but the time is ripe for a national **language technology policy** to follow suit. We have well-functioning speech synthesis and speech recognition tools, a machine learning-based multilingual translation engine, a number of clever word processors, and large text corpora and speech databases.

However, these existing resources need to be used more extensively to develop diverse language technology services, as well as to better coordinate and centralise them on a single platform (the Estonian Language Resources Centre is an important initiative in this direction).

One of the biggest threats and opportunities of the digital age is related to the development of **artificial intelligence**. While existential risks associated with AI deserve sustained attention in the long term, in the short term it is important to make sure AI applications serve the interests of both the Estonian state and culture. In this area, important work has been done within the framework of the Estonian National AI Strategy (the Kratt project) (2019–2022). The use of these AI solutions within the field of culture is still at an early stage, but the first attempts have been made. For example, the National Heritage Board has two projects under way: the Folli AI for automatic image recognition and the Sälli AI for the preservation and inventory of museum objects. Various machine learning tools are also being developed at the National Library. The creation of AI applications of this kind – both for the development of cultural services and for the analysis of cultural data – should be a priority of national cultural policy, as it will reduce future costs and increase the quality of services. This is particularly important, as the global market for AI is predicted to exceed €3.5 billion by 2022, but is concentrated in the hands of a few large companies, none of whom take the Estonian cultural context into account or build applications in Estonian.

Finally, there is an important **ecological dimension** to digital culture and the digital preservation of cultural heritage. Server farms and the development of AI models are very energy intensive. Platform and data business giants such as Google and Microsoft claim that their data centres run on renewable energy. For Estonia, it is important that the construction of data centres and server farms is accompanied by locally measurable (not global average) carbon offsets and the use of as much renewable energy as possible. It is important that Estonia consciously participates in the European green AI certification processes. In addition, and perhaps above all, it is important to ask whether all problems require energy-intensive machine learning-based solutions. There is a growing debate in the industry about the real cost of platform architecture and machine learning processes. In addition to direct costs, business cases should also take into account mineral and energy resources as well as data and human resources (including the impact on the mental and physical health of those involved in mining the mineral resources and the click-work involved in, for example, moderating violent and obscene web content).

To conclude: the pandemic-ridden year of digital culture has highlighted the need for a social contract that would formulate the principles governing Estonia's digital culture policy and the priorities of Estonian culture in the digital era. We need to agree on the core values of digital culture on which all subsequent initiatives will be built (participation, open data, data justice, environmental awareness, etc.). We need to tidy up Estonian legislation and support EU legislative initiatives that support the decentralization of internet infrastructures and digital services, and that would allow the use of cultural heritage for re-use and data analysis. In other words, we need a national digital culture strategy².

² The Estonian Ministry of Culture began this process in 2021.

A strategic digital culture policy does not emerge out of thin air, or out of mere academic interest; it needs institutional support. Currently, the field of digital culture is not coordinated or steered by any institution in Estonia, so it is high time to create a cross-sectoral and cross-ministerial digital culture development centre that would pool information, expertise and people; develop various national support and development programmes; draw up sectoral development plans and strategies; and act as an international partner for other digital culture development centres worldwide. The development of a digital culture should not be a one-year, ad-hoc project, but an ongoing, systematic and meaningful activity with a positive impact on all aspects of life. A diverse digital culture that supports a country's overall development does not emerge out of technology, meaning-making, or cultural or economic policy alone, but from a well-coordinated combination of these. If Estonia wants to remain a leading digital state and a dynamic culture also in the 21st century, we need to start implementing timely and forward-looking cultural and innovation policies.