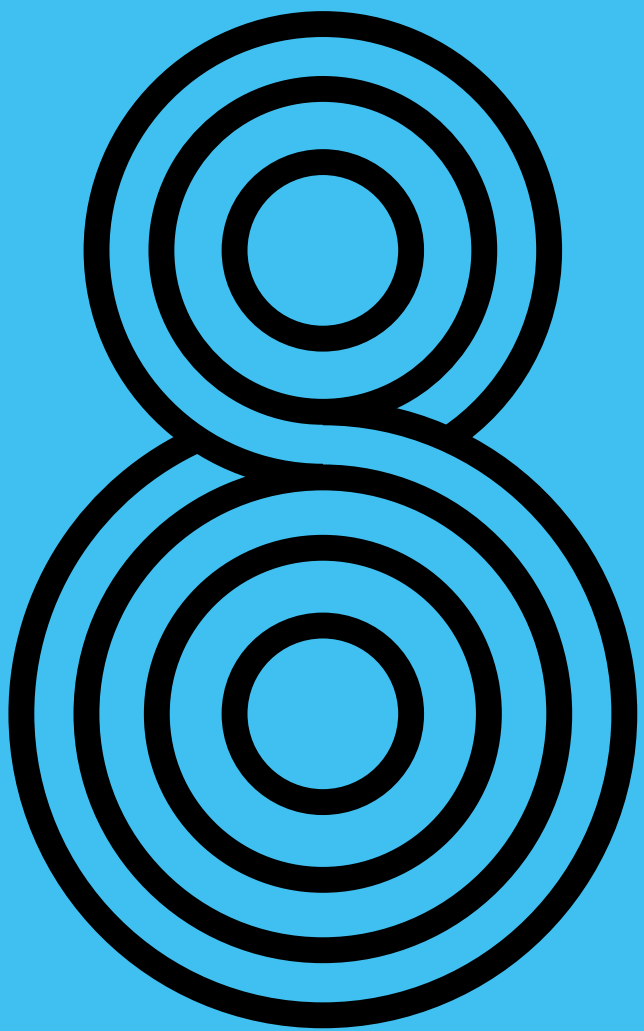
Eight requirements: **Making digital policy serve the public interest**



Wikimedia Deutschland

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Summary

For many years, Wikimedia Deutschland has been campaigning for policymakers to see digital policy also as social policy and ensure digitisation is serves the public interest. One of the aims of the current German federal government's digital strategy is to make digital policy more oriented around public interest.

But what does that mean for the political process and in terms of the outcome resulting from a digital-policy project? How is public interest firmly established for the long term? Drawing on perspectives from administration, associations, science, politics and business, Wikimedia Deutschland has developed eight requirements for public-interest-oriented digital policy. **Digital-policy projects need to be measured on specific requirements**. This enables them to be evaluated on the extent to which they contribute to public interest, and also highlights areas where there are still shortcomings.

Public interest is incorporated into digital policy via the design **process** and via the **impacts** of projects. Catering to the changing notions of public interest also requires **dynamic** adjustment mechanisms.

Process

In order for a digital-policy project to support public interest, the drafting process needs to meet two requirements.

1. **Transparency:** The planned process and objectives of a project need to be disclosed. There needs to be a clear plan as to who is accountable for the project and which perspectives will be incorporated, and how. This transparency is a pre-requisite for participation.

2. **Participation:** Various relevant perspectives need to be incorporated in order for a digital-policy project's objectives to be defined and its technical consequences to be assessed. Opportunities and risks need to be weighed up clearly and transparently.

Outcome

Here, we distinguish between factors relating to two questions: Does the digital-policy project prevent public harm? Are capabilities consequently strengthened?

Avoiding public harm

3. **No negative externalities:** Harmful impacts on the general public must be prevented; this is particularly true in terms of environmental sustainability. Providers and users of digital services and technologies often also fail to take into account the negative impacts of said services and technologies, and must be required to do so by law.

4. **Basic rights:** Basic rights must be taken into account and protected – such as freedom of opinion, assurance of privacy, the integrity of IT systems and the basic right to social participation. Whenever balancing is required, it needs to be transparent and involve the groups affected.

Strengthening capabilities

5. **Less inequality:** The digital-policy project must reduce inequalities and help ensure everyone has ample capabilities. This requires things such as internet access and media literacy, but also platforms that do not unilaterally impose conditions on their users.

6. **Openness:** The outcomes, products or findings resulting from the project need to be freely available. For example, software needs to be freely reusable and services need to be technically compatible with other services.

7. **Access:** The project must facilitate access to infrastructure, digital services, data or similar.

Dynamic adjustment

Notions of public interest are changeable as are the perspectives of relevant groups. That is why there needs to be mechanisms ensuring a digital-policy project retains its focus on public interest for the long term.

8. **Collective administration and renewal:** Policymakers must make the impacts and outcomes of digital-policy projects transparent. Continuous participation processes should be used to adjust the projects where necessary in order to promote public interest over the long term.

In digital-policy projects, a profit orientation (of those participating or the project itself) only allows scope for a public-interest focus under certain conditions. That is why it is important for the parties responsible to anticipate the tension between profit and public-interest orientation and establish scope for the latter, at least through the financing method, organisational structure and competitive setup.

A public-interest focus in digital-policy projects

We assessed three current projects in terms of our eight requirements to see which requirements they implemented well and where there are still shortcomings:

- Sovereign Tech Fund
- Mobility Data Space
- Data Institute

Public interest in the Sovereign Tech Fund: Keeping an eye on externalities, very effective participation

The Sovereign Tech Fund (STF) is a funding programme for open-source infrastructure with a funding volume of 11.5 million euros in 2023. The STF started in September 2022 with a now-completed pilot phase, and is now based at German Federal Agency for Disruptive Innovation.

The STF is mindful of ensuring no **negative externalities** arise or that any externalities in the open-source ecosystem are counteracted. According to the STF, negative externalities are possible in principle. Its aim is to use its funding to complement existing investments in open-source infrastructure. From an economic perspective, this makes sense for projects and activities that obtain little or no financial support from businesses because they do not benefit enough from them. If the STF were to become active in areas that businesses currently contribute to, this could force businesses to further reduce their contribution. The STF should make this risk observable, so as to be able to counteract it if it were to materialise in future.

The STF **extensively incorporated various perspectives** in its design. It established its aim of overcoming the shortcomings in financing for open-source infrastructure components in a feasibility study with the open-source community. The is transparent in terms of the fact that it only meets part of the need and that, for example, it does not support open-source applications or does not yet foster diversity in the open-source ecosystem. Ideally, the STF will remain in contact with the community to test whether and how its measures should change over time.

Public interest in the Mobility Data Space: Basic rights assured, skewed and late participation

The Mobility Data Space (MDS) was established as a GmbH (LLC) in 2021 to boost the exchanging of mobility data. The MDS has received 8.5 million euros in funding from the German Federal Ministry for Digital. Other partners, many of whom come from the automotive industry, are also contributing to the total funding of 15.6 million euros until 2024.

Participation in the MDS is voluntary and the data-holders can determine who is able to use data and for what purpose. There are so far no negative impacts on **basic rights** to be observed in the MDS and, according to its articles of association, it is 'committed to data sovereignty, data transparency and data protection'. Data protection in particular will ideally continue to be considered as an important aspect.

To date, extensive **perspectives** from the automotive industry have been **incorporated**, representing the majority of partners (excluding the three state governments). The MDS is currently endeavouring to involve additional active participants, including those from outside the automotive field), e.g. through participative formats. According to the German Federal Ministry for Digital, this is difficult to achieve. The articles of association also describe the objectives as being 'Automation and artificial intelligence' and 'Driverless cars'. These are

primarily compatible with profit-earning interests in the automotive industry, which, based on information provided by participants, is the political intention. As such, the objectives are only limitedly compatible with many mobility players operating outside the automotive industry, as they do not support other forms of mobility. Although the MDS considers itself a neutral platform, there are doubts as to the extent to which further objectives and perspectives will be able to be incorporated effectively down the track.

Public interest at the Data Institute: Very open, tension between agility and plannable participation

The Data Institute (DI) is a planned project being run by the German Federal Ministries of the Interior and Economic Affairs. It is due to start in 2023 with the funding or implementation of data projects, with 10 million euros a year in financing until 2025.

The DI faces two major challenges.

- Transparent, plannable participation is difficult and arduous to achieve with the intended agile approach being used to set up the DI. Agility means defining the next steps based on the latest findings, and this makes development less plannable and predictable – which in turn makes it more complex to ensure transparency and participation, because these need to be re-enabled with every new step. Participation is also important as a means of concretising the open target in a manner serving the public interest.
- The ministries are currently working on the **procurement process** for two use cases and the DI's organisational structure. In doing so, they strive to achieve an opening for players pursuing more public-interest-oriented interests. These have rarely been involved in procurement processes to date, because these processes are primarily intended to ensure a competitive selection of profit-oriented service providers. One challenge lies in the fact that established procurement criteria are rarely conducive to factoring in more public-interest-oriented players.

Ideally, the responsible ministries will clarify the extent to which the additional effort and expense for repeated, agility-induced participation is justified and which aspects of the DI are to be formulated with plannable participation. The process for selecting the parties due to implement the DI and its use cases will ideally also substantially factor in public-interest interests and anticipate tensions with profit-orientation.

Why public interest at all?

Digitisation affects all areas of life: personal, social, work and governmental. Digital policy is about ensuring this digitisation is democratic, and can have a variety of objectives. Public interest has significantly grown in importance here – for example as an overarching goal in Germany's digital strategy[1] and the EU's data strategy[2].

1 The digital strategy states: 'These figures are backed by the interest of all member states in more intensively utilising the potential of digitisation to improve cohesion in our society, promote public interest and increase the capabilities of business, science, research and the state.' Public interest is mentioned a total of eight times in the strategy.

2 The European Commission, for example, published a study on 'Towards a European strategy on business-to-government data sharing for the public interest'.

The aim of this policy paper

Increasing public interest through digital-policy projects is only a reasonable objective if the participants have an ideally similar understanding of what they consider public interest to be. While the term is currently being used more and more frequently in digital-policy debates, it usually remains unclear as to what the speakers mean or want. With this policy paper, Wikimedia Deutschland is helping concretise the requirements digital policy needs to meet in order to promote public interest.

These requirements should enable policy-makers to assess whether and the extent to which a digital-policy project contributes to public interest. They should sharpen the focus on how a public-interest-oriented approach can be boosted and consolidated. The process for selecting requirements for public-interest-oriented digital policy is based on Wikimedia's extensive experience in shaping digital technologies in the public interest. We have also involved experts from politics, science, business, civil society and administration to formulate and hone the requirements, as well as to examine the digital-policy projects.

The structure is as follows:

- We first classify the term 'public interest' and correlate it with other terms such as 'market' and 'public services'.
- We then explain the eight requirements geared around digital policy in order to establish public interest as firmly and extensively as possible. We use selected Wikimedia projects to illustrate how these can be implemented.
- We then apply the requirements to three digital-policy projects, namely the Sovereign Tech Fund, the Mobility Data Space and the Data Institute, thereby highlighting how these are already promoting public interest and which areas still ideally require a stronger focus.
- Finally, we present a catalogue of additional examples showing how Wikimedia is implementing the requirements.

Classifying public interest

A central feature of the concept of public interest is that there is no timeless understanding of what it is. It is a question that is constantly being readdressed within communities. That is why, instead of a closed, all-encompassing definition, we approach public interest by defining concepts that are generally associated with it: market, public services, charitability.

There is a broad scientific consensus that, when it comes to democratically addressing notions of public interest, it is collective interests – not private interests – such as those of citizen collectives that play an important role. Which specific groups need to be taken into consideration in each case depends on the question/area of application. We subscribe to Züger et al., who understand public interest being: 'Results that best serve the survival and wellbeing of a social collective/public over the long term. Based on this understanding, there needs to be deliberative negotiations over what serves public interest for every matter concerning the affected general public.'[3]

From an analytical perspective, it is a challenge to determine how a public-interest-oriented approach should be measured. Is public interest the sole objective of acting in the public interest? Is it about public interest achieving an appropriately high level of importance or will it suffice if the overall outcome is a positive net contribution to public interest? We do not have a definitive answer to these questions. Below, we approach public interest as not binarily present or absent. Instead, it makes sense to distinguish between different degrees of focus on public interest.[4]

3 Theresa Züger, Anna Katzy-Reinshagen, Judith Fassbender, Freia Kuper, Irina Kühnlein, (2022) CIVIC CODING: Empirische Erkenntnisse und Empfehlungen zur Unterstützung gemeinwohlorientierter KI, HIIG Policy Paper. In this, Züger et al. refer to Bozeman and Dewey's work as paving the way for their understanding.

4 Technically speaking, we assume ordinal measurability, i.e. the possibility of distinguishing between 'more' and 'less' public interest, without necessarily being able to talk about 'twice as much public interest'.

Relationship with the market

A public-interest focus and market logic are often described as opposites.[5] This does not comprehensively define the relationship of the two objectives, as there is a whole range of outcomes achieved on markets: While some market players cause climate damage and poor working conditions, others provide eco-friendly products with fair conditions. These outcomes are a result of supply, demand and political context, including through regulation. We will describe the factors that influence the extent to which market logic permits or impedes public interest.

We will examine three factors that can prevent public interest from being taken into consideration: the exclusivity of profit orientation, ownership structure and the role of competition. Only if these permit a focus on public interest can people with the relevant will and power pursue public-interest objectives.

Profit focus: Solely striving to achieve profit is not compatible with a public-interest focus in practice. It is hypothetically conceivable for all profit that is not necessary for entrepreneurial incentives to be returned to the community (which could then use for public interest) through taxation. However, corporate taxation does not currently aspire to follow such a principle, i.e. the charging of taxes on this scale, and taxation practice itself certainly does not follow such a principle of tax optimisation. It is also hypothetically conceivable for there to be a commercial product that significantly contributes to public interest. But by the time it is marketed, questions would start to be raised about what price it will be sold for and under what conditions: The higher the price or the worse the conditions (for the customers), the more profitable the product, but also all the less social benefit it will provide. In other words, public interest generally has a fraught relationship with profit orientation in practice. Taking into account aspects such as environmental impacts or eliminating inequality often comes at the expense of profits. It is, however, possible for organisations to pursue multiple objectives and to be prepared not to optimise profit in order to achieve additional objectives. Companies can demonstrate such intentions by formulating a public-interest balance sheet.[6] In order for this to be effective, there also needs to be certain scope within the ownership structure and competitive environment.

Ownership structure: Whether or not there is scope for effective considerations between profit-optimisation and public-interest focus also depends on the ownership structure. If financial KPIs are determining, and thus restricting, business operations, there will be no scope for public interest. This applies to large tech groups and start-ups alike if they are exposed to the pressure of venture-capital investors wanting scaling to be as steep as possible. Scope can be created by choosing a different organisational structure, such as a non-profit GmbH (LLC), a privately owned company such as a family business, a co-operative or, in the case of eco-focused search engine Ecosia, a ‘purpose company’. This company cannot distribute profit and cannot be sold, but must instead serve a specifically defined purpose.

Competition: Competition plays an ambivalent role. On the one hand, it is problematic if a company has little or no competition, because then it has market power that it can abuse, e.g. by charging higher prices, delivering poorer quality or asserting other disadvantageous conditions for its customers. That is why the general assumption is for competition to have a disciplinary effect. On the other hand, competition can also make it difficult to pursue objectives in tandem with profit-optimisation. This is particularly true if an organisation that also focuses on public interest is competing with a purely profit-oriented organisation; in a battle for market share, it is very easy for public interest to be left by the wayside, as an organisation’s survival can otherwise be at risk. Apps’ data-collection practices are one example of this: Monetisation via the sale of personal data is commonplace, and avoiding it via one-off payments or subscription apps very rarely works. This increases pressure on new apps to also use extensive data monetisation.

5 For example, the Civic Coding research report.

6 They can use the Economy for the Common Good here, like outdoor-clothing producer Vaude.

These factors are only necessary, but not sufficient, conditions for ensuring public interest on the market. There is also a need for people with the power and will to utilise this scope to assert a public-interest focus at the expense of profit. This power is most frequently held by those controlling companies. For example, Teun van de Keuken founded chocolate-maker Tony's Chocolonely to launch an alternative to cocoa produced through slave labour. Owners of family businesses or members of co-operatives can also have such scope. Intra-organisational democracy can also help strengthen additional objectives and prospects in addition to the profit focus. Other groups with power can include financers or the customers. In some cases, the latter's purchase behaviour can force organisations to prioritise certain objectives in their operations, and thus mitigate the tension between profit and public interest. Corporate Social Responsibility and Corporate Digital Responsibility are currently popular buzzwords, though they also always raise the question of the extent to which organisations only implement the relevant principles sporadically for aesthetic or actually implement them at a fundamental level.

The European Commission imposes similar requirements on 'social enterprises'.[7] But these criteria remain very flexible if no one defines them in a more concrete manner, and this is evidenced by the fact that, according to the organisation in charge of the project, no application for special funding for social enterprises has so far been rejected based on the criteria.[8] This implies that there is a need to develop a rich understanding of public interest that enables a distinction between public interest and other objectives.

Relationship with public services and charitability

Public interest and the provision of public services are interlinked. Both are the result of democratic negotiation.[9] Public interest includes public services, but is not wholly and solely about them. Very generally speaking, public services are geared around a minimum subsistence level that should be available to everyone.[10] The exact scope of public services requires legal clarification in parts, but it always adapts to the 'real changes in everyday reality', which includes technological developments.[11] In other words, the government must ensure everyone has access to a minimum level of care. Public interest goes beyond this by also pursuing objectives negotiated collectively, in addition to minimum conditions for material survival and participation in society.

Public interest and charitability have some areas of overlap, and their relationship is also unclear. Charitability is defined in terms of tax privileges for clubs, associations or foundations. One key feature is that organisations 'are dedicated to the altruistic advancement of the general public in material, spiritual or moral respects'[12]. The law states 26 charitable purposes, including religion and sport (also chess). The focus on fiscal law demonstrates that the primary focus is not on assessing the charitability of governmental players. In contrast, a call to serve the public interest refers to a broad general public that also includes publicly active parties. Policymakers are indeed a key target audience of public-interest demands, because democratic negotiation is an accepted approach, particularly in the political process.

7 Use of the term ‚social enterprise' by the European Commission:
'– Those for who the social or societal objective of the public interest is the reason for the commercial activity, often in the form of a high level of social innovation,
– Those whose profits are mainly reinvested to achieve this social objective, and
– Those where the method of organisation or the ownership system reflects the enterprise's mission, using democratic or participatory principles or focusing on social justice.'

8 According to project sponsor EFG Europäisches Fördermanagement GmbH, the React with Impact funding guideline also assists social enterprises that declare they support the United Nations' Sustainable Development Goals, which are also very broad.

9 For a detailed overview of the relationship's definition, see Milstein, Alexander (2018): 'Daseinsvorsorge' in: ARL – AkademiefürRaumforschung und Landesplanung (ed.).

10 Mause, Karsten (2018): 'Daseinsvorsorge', in: Voigt, Rüdiger (ed.):Handbuch Staat, Springer VS, p. 415-421.

11 Wissenschaftliche Dienste, Deutscher Bundestag (2012), 'Internet als Teil der staatlichen Daseinsvorsorge', p. 11.

12 German Tax Code §52 (1).

Public interest for digital-policy projects

Public interest pursues a different logic to the market – one of democratically negotiating objectives due to be pursued through collective action. Even for digital-policy projects, market logic is only compatible with a public-interest focus under certain conditions. The projects themselves need thus to be designed in such a way that they credibly dissolve the tension between a public-interest and profit focus in favour of the former. As such, the projects need to choose a suitable organisational structure and take measures that support public interest, even in the face of profit-oriented competition if necessary.

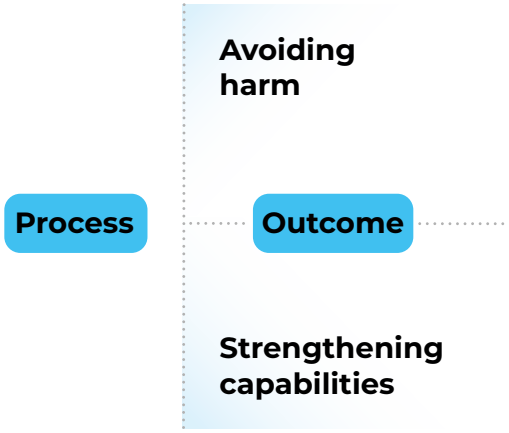
Public interest extends beyond public services, yet digital-policy projects can also support public interest by expanding digital services. A public-interest focus is not the same as charitability, but is instead explicitly not primarily relevant for private players; it is also relevant for politically active players. It is therefore not constructive to measure digital-policy projects based on public-benefit criteria, though involving parties active in ensuring public benefit can help firmly establish a public-interest focus in projects.

Requirements for public-interest-oriented digital policy

How can we assess the extent to which a digital-policy project has a public-interest focus or promotes public interest? We distinguish between criteria in three different areas (Figure 1.1):

- What is the structure of the **process** in which the digital-policy project is being developed?
- What **outcomes** does the digital-policy project achieve in terms of **avoiding public harm**?
- What **outcomes** does the digital-policy project achieve in terms of **strengthening collective capabilities**?

Figure 1.1
Areas of public-interest requirements



Both the process and the outcome provide legitimacy for digital-policy projects in terms of their public-interest focus. [13]

Below we will initially explain these areas and the eight corresponding requirements in detail. We will then apply these as examples to three digital-policy projects: the Data Institute, the Mobility Data Space and the Sovereign Tech Fund.

We will be concentrating on projects predominantly under political control, i.e. initiated and/or run by ministries or parliaments at a federal, state or municipal level. These particularly include regulation and funding programmes. There are also other active players, e.g. in civil society, who can, in some cases, run similar projects and who are presumably subject to similar requirements. But we have not examined this in depth and thus cannot apply our conclusions to these.

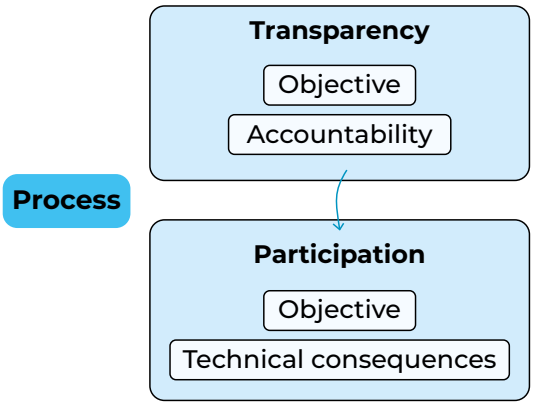
For each requirement, we will also cite examples from the Wikimedia projects and describe how this requirement is implemented there. A more extensive list of mechanisms used by Wikimedia projects to establish a public-interest focus can be found in the list of examples further down.

13 We thus follow the approach adopted by political scientist Fritz Scharpf and the ethics debate over a process or outcome focus in assessing actions.

Process

The process for defining and structuring a digital-policy project significantly influences its public-interest focus. The process revolves around the question of how to enable effective participation for groups with different perspectives.[14] This particularly applies to groups with public-interest-oriented perspectives, such as civil society, which include social interests. As shown in Figure 1.2, transparency is a pre-requisite for effective participation. Participation should occur as a minimum for digital-policy project objectives and for assessing technical consequences, but can extend well beyond this and also include implementation.

Figure 1.2
Public-interest requirements in terms of the process



Transparency

To ensure key players in society can participate effectively, there needs to be transparency in a series of aspects. In addition to scheduling and participation options, these are, as a minimum:

- **The (collective) issue to be addressed:** What question/problems does a digital-policy project need to address? This question is tackled before the project is designed, so that various solutions can be considered and one or more preferred options selected. There needs to be transparency regarding the extent to which objectives have already been set, and by whom, before a participation process can start.
- **Accountability:** Who is accountable for carrying out the project? The answer to this question determines who takes accountability for success, for resolving unexpected issues and for any failures, and who accounts for the process and outcomes. While it is usually impossible to totally discount all risks from the outset, clearly dividing up responsibility ensures someone is in charge of anticipating and limiting risks, while also expediting the steps necessary for success.

Transparency at Wikimedia

Software development for Wikidata
Wikidata's developers use the public Wikidata Development Roadmap to announce the planned software projects every year and put these up for discussion. Regular Wikidata updates are advised in the Wikidata Telegram Group's office hour. The developers also provide updates via the newsletter. Volunteers can use the Phabricator platform to send requests or report errors to the software developers and openly view the progress and status.

Wikipedia, the free encyclopaedia
Wikipedia shows how transparency works: every change to an article is traceable via the version history. The same applies to discussions on disputed article content, the relevance criteria and the criteria for encyclopaedic writing or the use of bibliographies and sources.

Participation

Effective participation occurs when the political process for developing a project actually incorporates the **perspectives of different groups**, as a minimum, and ideally also enables forms of co-operation or co-decision-making.

14 About the term 'participation'.

There are three aspects to take into account here:

- Firstly, those responsible at a political level need to advise the form(s) of participation they plan to implement and how they intend to ensure effectiveness. This plays a crucial role in whether or not participation projects are accepted. Herein lies the difference with ineffective participation, in which policymakers do implement participation formats such as written consultations, stakeholder workshops and hearings, but ignore the outcomes of these.

- Secondly, it is important not to only invite active players already well networked in politics, but rather to also systematically inform others of the option of participation.[15]

- Thirdly, there needs to be a way of providing feedback on the results of the participation, which includes how it influenced the project (unless this is visible via another structural feature of the process).

Effective participation should occur in relation to the following aspects, as a minimum:

- **The (collective) issue to be addressed:** What impact does the participation have on the issue for the digital-policy project? The suitable solution also needs to be chosen by incorporating various (and not just digital-policy) perspectives.

- **Technical consequences:** What opportunities and risks are associated with the digital-policy project? Which are/should be a core part of the project? What are the desirable or undesirable side effects? In most cases, not all possible affected groups will only see opportunities; they will also see risks – and these need to be taken into account. Opportunities and risks for all affected groups should be weighed up in a transparent, clearly traceable manner; conflicts of interest need to be addressed and discussed openly, and criteria for weighing up the opportunities and risks need to be discussed and at least disclosed.

Effective participation at Wikimedia

Technical Wishes

The Technical Wishes ('Technische Wünsche') project combines software development with community in order to create better technical functions. Participation begins with a survey that is used to establish focus areas for two years. Specific problems the software developers are working on are then identified through interviews or workshops with the volunteers.

The Wikimedia Movement Strategy 2030

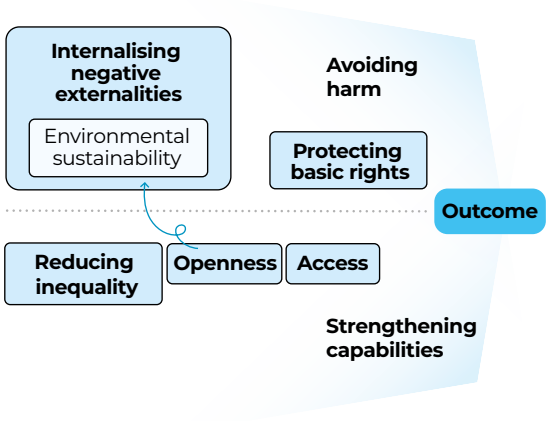
The Movement Strategy has seen the global Wikimedia movement set ten objectives for its development until 2030. To appropriately involve the international community, the participation options need to cater to the various communication habits, time resources and interests. The Movement Strategy Forum in turn provides a digital platform for constant dialogue, while the Playbook documents the participation lessons volunteers and paid full-time workers have learned to date.

15 The EU Commission uses the 'Have Your Say' portal here; the coalition agreement from 2021 also provides for a 'digital legislation tool' and seeks to 'try out options for public commentary'. (p. 10)

Outcome

Digital-policy projects can promote public interest by preventing public harm or pursuing public-interest objectives that we encompass under the umbrella term of 'strengthening capabilities'. Figure 1.3 provides an overview of the requirements relevant for public-interest-oriented digital policy, which we will describe in detail further on.

Figure 1.3
Public-interest requirements in terms of outcome



Digital-policy projects such as regulation or funding programmes can prevent public harm, e.g. curb the propagation of illegal content, or support socially beneficial objectives, such as productive political discussion in digital spaces. They can also seek to shape markets and strengthen socially desirable practices. For example, the Data Governance Act seeks to establish/strengthen a certain form of data intermediaries on the market at an EU level.

It may be necessary to weigh up the various requirements, e.g. if broader access to digital technologies increases resource usage and thus causes negative externalities. We have not extensively examined the general principles for such considerations. What is clear, however, is that conflicts of objectives need to be made transparent and discussed in order to ensure the requirements are weighed up with a focus on public interest.

Avoiding public harm

Two requirements need to be met in order for public harm to be avoided: externalities need to be internalised and basic rights need to continue to be protected.

Internalising externalities

Digital technologies or services can involve externalities. Providers of these technologies or services usually do not take these into account because they have a negative effect on third parties/the general public.

The most prominent negative externalities at present are the environmental impacts, which are generally discussed under the term environmental sustainability. There is a social and scientific consensus that fundamental changes are required in order to limit the negative impacts of overstraining the natural bases of life or to bring human activity into alignment with these bases of life.[16] As such, when it comes to ensuring digital-policy projects are focused on public interest, it is important that they prevent/avoid negative effects on environmental sustainability. For example, they should generally promote resource efficiency, a circular economy and environmentally sustainable lifestyles instead of condoning additional resource and energy usage by digital technology. Developers could, for instance, be mindful of AI models' emissions usage, as this appears to be an obvious lever for eco-friendlier digitisation. [17]

16 See for example the IPCC Summary Report (2023).

17 Dhar, Payal (2020): 'The carbon impact of artificial intelligence', Nature Machine Intelligence, 2, August, p. 423–425

Negative externalities cause market failure and justify governmental intervention. They also exist in digital spaces, for example:

- When a public discussion is fuelled by algorithms and polarised on social networks, thus becoming less productive and having a negative impact on its participants;
- When those sharing data about themselves thus also disclose a lot about others similar to them and who are then not able to protect their privacy as effectively; [18]
- When the added value of digital services is based on people in countries without OHS where they filter reported content or annotate content as training data under precarious circumstances; [19]
- When private communication is monitored en masse and without cause in order to protect vulnerable groups. The externalities are an abuse of the basic right to privacy and 'chilling effects' that limit free and legal expression of opinion.[20]

Digital-policy projects in the public interest should aim to avoid such externalities.

Protecting basic rights

Digital technologies or services often affect basic public rights[21], such as freedom of opinion, protection of privacy and the integrity of IT systems or the basic right to social participation. Public-interest-focused digital-policy projects should ensure basic rights are comprehensively taken into account and protected in digital spaces. When considerations are necessary, these must be transparent and involve the relevant groups. As the basic rights of poorly represented groups are often those most affected, responsible political players also need to ensure active targeting and involvement.

Protecting basic rights and avoiding public harm at Wikimedia

The Linked Open Data strategy

The data objects in Wikidad are structured and machine-readable and can be freely used and interlinked worldwide. They are thus Linked Open Data. Wikidata is, among other things, the basis for voice assistants. The Linked Open Data strategy aims to permanently maintain this open system and thus enable the database to be used by many individuals, associations, institutions and even businesses.

Policy team and the F5 alliance

The Policy and Public Sector team – including in the F5 alliance – advocate strengthening basic-rights perspectives in the digital discourse, whether this be at parliamentary breakfasts with MPs, through the Monsters of Law series of speeches that discuss legal matters in laypeople's terms or through policy briefs conveying civil society's perspectives of digital-policy issues.

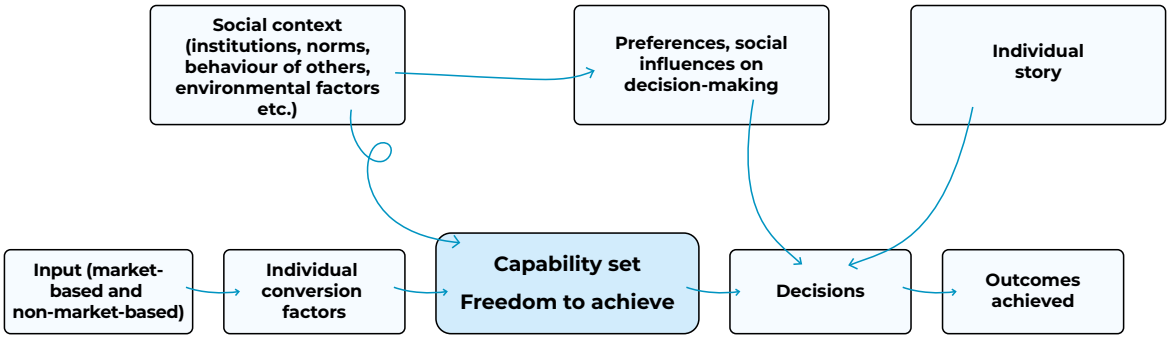
18 Acemoglu, Daron, Ali Makhdoumi, Azarakhsh Malekian, and Asu Ozdaglar (2022): „Too Much Data: Prices and Ineffi-ciencies in Data Markets." American Economic Journal: Microeconomics, 14 (4): S. 218-56.

19 This was addressed at the first Content Moderators Summit in March 2023.

20 Marthews, Alex and Tucker, Catherine E. (2017): 'Government Surveillance and Internet Search Behavior'.

21 An overview of basic rights.

Figure 1.4
An overview of the Capability Approach



Source: Diagram by Aline Blankertz based on Marco J. Haenssgen, Proochista Ariana (2018): 'The place of technology in the Capability Approach', Oxford Development Studies, 46:1, p. 98-112 and Ingrid Robeyns (2005): 'The Capability Approach: a theoretical survey', Journal of Human Development, 6:1, p. 93-117.

Strengthening capabilities

The unique potential of public-interest-focused digital policy lies in the fact that it can not only prevent public harm but also pursue **objectives that benefit society**. As society benefits constantly need to be negotiated democratically, we believe it is appropriate, given the current state of society, to follow the Capability Approach formulated by Nobel Prize-winner in Economic Sciences, Amartya Sen – because this is compatible with the objectives of a liberal democracy, where individuals are supposed to have extensive lifestyle freedoms. The Capability Approach focuses on the fact that this requires socially subdivided bases to ensure everyone has similar capabilities. This fits the aforementioned notion of public interest that focuses on collectively negotiated objectives, assuming these objectives encompass individual opportunities for development and are provided most effectively collectively.

Capability Approach

According to the Capability Approach, it is not just economic wealth that is significant as a general indicator. The focus is instead on creating **prerequisites for a successful way of life** for all members of a society. The Capability Approach is the basis for the United Nations Human Development Index.

Figure 1.4 shows an overview of the approach. The Capability Approach is distinguished from, for example, outcome-based approaches, in which absolute economic differences serve as the benchmark (bottom right in Figure 1.4). According to the Capability Approach, the idea is for all people to benefit from a set of capabilities that is as extensive as possible – and institutional and social aspects play a key role in this. The Capability Approach combines the individual level (as individuals make choices based on their capabilities) and the collective level (as many bases for these capabilities are provided collectively).

In a digital-policy context, the Capability Approach can sharpen the focus on the fact that digital services and technologies influence individuals' capabilities. Digital technologies shape the social context that impacts individuals' capabilities, and influence how material bases for capabilities are established. For example, personalised content can help people become more (or less) open to political discussions and comparison services can promote more competition and lower prices for customers. But they can also be misleading and result in worsened market results for consumers. Public-interest-oriented digital-policy projects should help ensure that capabilities, as an overarching purpose, are created. Economic wealth and efficient markets are a means of achieving this.

Reducing inequality

One sub-aspect of the Capability Approach is the distribution of these capabilities; they need to be distributed as evenly as possible. Input such as access to end devices and computing capacity is currently distributed unevenly, and the individual conversion factors are similarly characterised by unevenly distributed media/digital literacy. While political views vary in regards to how much inequality is considered acceptable, there is a broad consensus that the trend needs to be towards a reducing in inequality.

Digital technologies or services can significantly influence distribution. They can reinforce inequalities by giving platforms intense bargaining power over weaker groups. This is apparent in the context of the gig economy, where poorly paid people enter into insecure working conditions with driving and delivery services. Another example is the use of an algorithm by Austria's Public Employment Service (Arbeitsmarktservice, AMS), which recommends the scope of support for job-seekers based on their estimated placement opportunities. In addition to criticism of possible inaccuracies, there is also the concern that focusing solely on efficiency can lead to people in less favourable positions (such as women with care obligations) receiving less support.[22]

To promote public interest, digital-policy projects need to determine distribution effects and aim to reduce inequalities by encouraging capabilities that are as balanced as possible.

Reducing inequality at Wikimedia

Diversity in the community
Volunteers' group FemNetz seeks to 'help promote a welcoming culture in Wikipedia to ensure it remains accessible and worth reading for all kinds of people even in future.' FemSupport assists novices with editing, while WomenEdit fills gaps within Wikipedia, thus increasing the number of articles about female architects, scientists, resistance fighters and other underrepresented female figures.

Movement Charter Ambassadors
The Movement Charter is the central governance document for the global Wikimedia movement. Not all members of local communities have the same staffing and time resources to participate in this process. The Movement Charter Ambassadors are volunteers who collect input for their region, city or a specific project through community conversations and incorporate this into the charter-drafting process.

Openness

Results of digital-policy projects that are open to reuse help with several public-interest-oriented objectives: openness reduces the need to use multiple resources (time, computing capacities etc.) for things such as collecting data or developing a service. This is environmentally sustainable. Openness also provides many people with access to the content of digital-policy projects. This is true for civil-society or generally small organisations that themselves do not have the resources to create this content or pay for it to be created. From an economic perspective, this generates more competition on a basis accessible to many, which in turn tends to counteract inequality.

Openness plays an important role in digital policy because, in many projects, it is a design element on which decisions are made and which in turn influences many other decisions. In some instances, openness is seen as an end in itself, though the general trend is to

22 See Streit um den AMS-Algorithmus geht in die nächste Runde, Gericht macht Weg für den AMS-Algorithmus wieder frei, project by the Austrian Academy of Sciences.

see openness as a lever for more capabilites.[23] Openness can take different forms depending on its application. In software, free and open reusability plays a key role, whereas in services, interoperability – i.e. the technical linkability to other services – can also be a factor.

Openness at Wikimedia

MediaWiki

MediaWiki is the knowledge-management system behind Wikipedia that is freely available as software. Anyone can download it and use it to organise knowledge and make this knowledge accessible. Companies and authorities such as NASA, Intel, the Mecklenburg-Vorpommern State Office for the Environment und the Zentrale für Unterrichtsmedien im Internet all use MediaWiki.

Licences at Wikipedia & co

The community contributing to Wikimedia projects is diverse but unified in one goal: to make more knowledge, data and media freely available digitally. As such, the projects can only use content licensed under CC-0, CC-BY or CC-BY SA and which therefore has little to no restrictions on its reusability.

Access to digital infrastructure and services

Low-threshold access means as many people as possible can be involved and participate in the digital space.[24] A public-interest-focused digital policy consequently ensures that infrastructure and services are **accessible** and **available** with as low a threshold as possible. This means there needs to be adequate capacities, which is often less problematic for purely digital assets than for the underlying physical infrastructure.

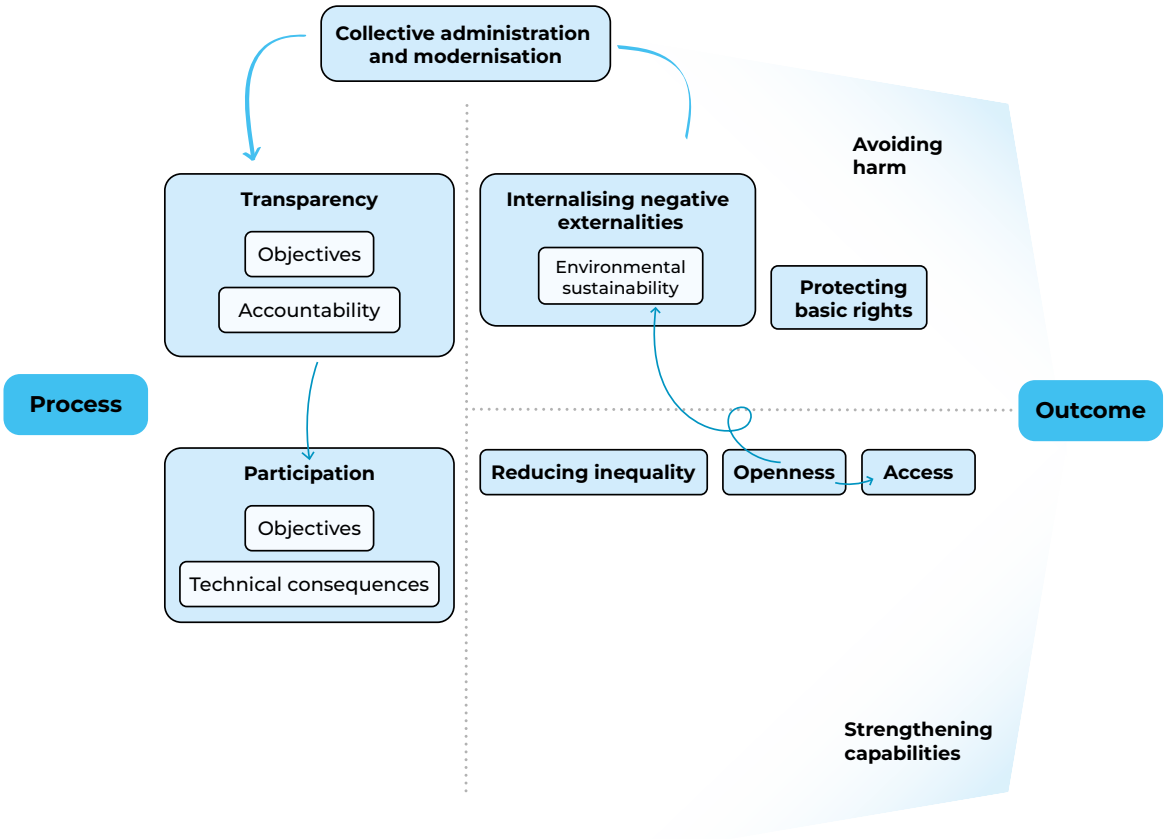
The access to digital infrastructure and services depends on a number of factors: In terms of pure **usage**, a low price or even no price at all ensures monetary prerequisites such as income play less of a role in who is able to use a service. Open-source protocols such as ActivityPub or Bluesky[25] can provide broad access to the designing of services. They are the basis for, among other things, the federated social network Mastodon. In addition to being freely reusable, their source text can also be freely viewed. However, certain programming skills currently still remain unavoidable and highlight the important role played by digital literacy, which is equally critical for access.

23 The non-governmental organisation Open Future has published a series of discussion posts on the importance of openness, starting with The Paradox of Open.

24 While the issue of access to infrastructure and services ties in closely with that of distribution, the two are not totally identical – because access that is as low-threshold as possible also helps reduce inequality, but this is also true when everyone has a similarly low level of access.

25 Released in 2018, ActivityPub is an open, decentralised protocol for social networks that is managed by the W3C; Bluesky is a Public Benefit LLC created out of Twitter and which is currently working on an equally decentralised protocol for social interactions.

Figure 1.5
The dynamic dimension of a public-interest focus



Access at Wikimedia

Community support & mentorship programme

A lack of access to software, hardware or digital services can pose an obstacle for active co-operation in Wikipedia. That is why the support services provided by the Communities and Engagement team include software grants, technical equipment for hire and the Wikipedia Library, which gives volunteers access to digital databases and literature, as well as general access to technical literature.

Wikibase Cloud

Wikibase is the software behind the free and open database Wikidata. Wikimedia is developing the Wikibase Cloud to enable users with fewer financial means or less technical know-how to build a database. Wikimedia takes care of hosting, and even data holders who are not professionals are able to install it. There are also tutorials on topics such as data-modelling. It is currently a beta service for which any interested parties can register here.

Dynamic considerations

Digital policy focused on public interest cannot be static; it needs to ensure it also provides for **collective administration, revision and modernisation** of digital-policy projects, as shown in Figure 1.5 – because both the notion of public interest and the perspectives relevant to participation are constantly being further developed. This means that effective process participation should not only be translated into results once, but that this translation is instead an ongoing process used to make the results of digital-policy projects transparent[26] and, if necessary, adapt them for the future through participation processes.

26 The German Federal Ministry for Digital is currently working with Agora Digitale Transformation on an evaluation concept whose status had not been released at the time of publication.

A digital policy focused on public interest needs to ensure long-term ties to public-interest-focused objectives. This involves two main challenges:

- How do you prevent public-interest-oriented projects from feeling the need to reduce or sacrifice their public-interest focus in response to **competition not focused on public interest**? Companies focused purely on profit usually have better access to resources, particularly financing, which enables, among other things, higher salaries for better trained employees.

- How can **long-term governmental support** be structured so that it takes into account the dtension between market and public-interest logic? At present, it is almost impossible for public-interest-focused projects to obtain governmental support to improve their services. In contrast, it is often easier for providers focused purely on profit to receive support when commercialisation can be shown to be viable.

Even if there are no clear strategies for tackling these challenges at the start of a project, policymakers should create ways of incorporating this down the track.

Collective administration and modernisation at Wikimedia

Software development and pink ponies
Software developers use Pink Pony Sessions to give the Wikidata project a public-interest focus over the long term, as well as to pick up on and implement ideas and visions from the community. 'Make a wish, doesn't matter what it's for. It could even be something like "I want a pink pony"'. The ideas from the sessions are visible to the public.

The Support Barometer
Wikimedia Deutschland supports the activities of the volunteers' community with various measures, whether these be financial, organisational or in the form of ideas. Every quarter since 2017, the Support Barometer has been showing who is using which support services, what is working and what isn't, and what additional services the volunteers would like. The reports are available for viewing by the public.

Public interest in current digital-policy projects

To what extent do current digital-policy projects meet the eight requirements? Below, we more closely examine three projects that cover a range of different digital-policy support measures. In doing so, we illustrate how a focus on public interest can be incorporated into digital policy, and highlight how existing projects can become more oriented around public interest.

The three projects are the Data Institute (DI), the Sovereign Tech Fund (STF) and the Mobility Data Space (MDS). We chose these three projects to show projects with different objectives, implementation statuses and organisational structures.

Table 1
Overview of the three digital-policy projects examined

	STF	MDS	DI
Objective	To support open-source infrastructure	To support data exchange in the mobility space	To support the use and provision of data
Reference to the 2021 coalition agreement	'We also ensure digital sovereignty through means such as the right to interoperability and portability, as well as by focusing on open standards, open source and European ecosystems...'	'We are further developing the mobility data space'	'The aim of the Data Institute is to advance data availability and standardisation and establish data trustee models and licences.'
Ministry responsible	German Federal Ministry for Economic Affairs (BMWK)	German Federal Ministry for Digital (BMDV)	German Federal Ministry for Economic Affairs and German Federal Ministry of the Interior (BMWK and BMI)
Implementation status	Operational since September 2022	Established in June 2021	In planning phase, two use cases to be initiated in 2023
Organisational structure	Currently affiliated with SPRIND, aiming for independence	GmbH (equivalent of LLC)	Still being set up through call for tenders, details as yet unclear
Financing	€ 11.5 million for 2023, annual financing	€ 8.5 million since 2021, together with private financing €15.6 million (top-up planned)	€ 10 million/year between 2023 and 2025

Process

Did the project development and implementation process create opportunities for effectively involving interest groups, at least in relation to

- The project's **objectives** and
- Its possible **technical consequences**?

And did the parties accountable create the necessary transparency, at least in relation to

- The project's **objectives** and
- The **accountabilities** for impacts and outcomes?

The three projects have adopted different approaches here.

Transparency

The **STF** ensures transparency by publicly documenting its path from the feasibility study[27] to the start of the pilot phase to the evaluation thereof[28] in the form of reports and announcements about funded projects, their associated activities, and events. In this documentation, it also shows the areas that will become more transparent. This relates to aspects such as the quantitative metrics used to assess applications for funding. This degree of transparency should continue to increase in order to serve public interest.

- The **objective** is to make up for gaps in funding for open-source infrastructure components. Particularly critical components should be assigned more resources, especially in the form of time dedicated by those developing them, in order to support an open software ecosystem.

- **Accountability** for the outcomes of the STF funding lies with the funded projects themselves. The STF itself is part of the Federal Agency for Disruptive Innovation (SPRIND), which receives annual funding from the German Federal Ministry for Economic Affairs. It is thus anticipated that the STF's impact can be assessed at a political level regularly and readjusted where necessary. Public-interest considerations should play a key role here.

The **MDS** creates transparency through a public website documenting participants and use cases. But transparency is lacking in some important areas: The GmbH's articles of association are only accessible through the commercial registry (and not through founding partner acatech - Deutsche Akademie der Technikwissenschaften e. V.). It is not possible to see when and how much public funding (including from the state governments now participating) is provided. The commercial registry also shows that most shares continue to be held by acatech, but it is unclear what this means for internal governance, i.e. how decisions are made and which interests acatech represents. There ideally should be more transparency for these points, at least through more comprehensive documentation on the website. For example, the website does not show that, according to the German Federal Ministry for Digital and acatech, one of the MDS' key focuses is currently on involving more members from outside the automotive sector.

27 STF feasibility study, October 2021.

28 STF pilot-phase evaluation report, April 2023.

- The **objectives** cited by the MDS articles of association are 'automation and artificial intelligence' and 'driverless cars'. Aspects such as eco-friendliness are mentioned in passing.

- **Accountability** for MDS implementation and outcomes lies predominantly with acatech as the GmbH's founding partner. The German Federal Ministry for Digital seems to have little control, which can be seen as problematic given the public monies contributed. The mixed financing makes it difficult to trace how political and economic objectives are aligned/weighed up. There is similarly no information on where exactly the private funds are coming from and how these influence voting rights. From the outside looking in, it is unclear who has set the objectives to date and who has what powers in terms of the MDS' further development. Who is responsible for involving participants from outside the automotive industry? Who could also initiate internal changes at MDS where necessary?

The **DI** so far has limited transparency. The report[29] by the founding commission was published promptly after its submission, while other documents[30] were delayed by several months. There have so far also only been short-term projections as to the expected participation formats. The participating ministries will ideally create more transparency, particularly in terms of the DI's potential role in using more data to serve the public. This is especially true in relation to who is accountable for the current DI-founding process and how this is structured.

- One particular challenge for the DI's **objectives** is the fact that many perspectives generally need to be taken into account. The wide range of players with varying interests – business, administration, civil society – makes it difficult to define a clear focus and transparently outline how this is established. Not having a clear objective would be fatal in this respect, implying that it is impossible to have a focus on a long-term goal and that therefore only short-term measures are to be anticipated.

- **Accountability** for the DI's impact currently lies with two ministries: the German Federal Ministry for Economic Affairs and the German Federal Ministry of the Interior. This makes the external accountability particularly opaque, as it is unclear who makes decisions and how, and who is contactable and accountable for these. In the medium term, the DI needs to adopt its own organisational structure, though it is still yet to be determined how the accountability will be handed over to the DI and what role political players will then play. What does appear clearer at present is the fact that the DI needs to work agilely. This means that the next steps will be defined based on the latest findings. But accountability is also essential with agile approaches.

Beteiligung

To what extent do the projects involve perspectives from different groups? To what extent does this occur particularly in relation to:

- The **objective** or the issue to be resolved?
- Possible **technical consequences**?

In the context of its feasibility and evaluation studies, the STF obtained various perspectives and surveyed the funding required in the open-source community.[31] Among the STF's current focuses is the question of what formats it can use to obtain input in order to extend beyond the informal network of participating persons.

29 Der Weg zu einem Dateninstitut für Deutschland, Zwischenbericht – Erste Empfehlungen der Gründungskommission, December 2023.

30 Based on our knowledge, the outcomes of the stakeholder consultation and accompanying assessments in particular were only published online in May 2023.

31 There has been criticism from the community regarding the STF's name, as sovereignty is often associated with nationalist views, and also regarding the approach centred on temporary funding that does not secure open-source infrastructure for the long term.

- The STF established its **objective** based on the community whose projects needed funding, and then implemented this as a political project. But the STF is so far only able to cover part of this. Questions, such as in relation to the long-term nature of the funding and diversity, currently remain unanswered. There is also a need for funding for open-source applications (instead of open-source infrastructure) beyond the STF's focus.

- According to the STF, the **technical consequences** can predominantly be observed in the pilot phase, as most of the funded projects are already in use. There is so far no specific approach for determining the technical consequences of future projects in a structured manner.

Ideally, the STF will remain in contact with the community and others in order to test whether its measures appropriately cover the need in scope or how these can be refined.

The **MDS** describes itself as an alliance of many players in the German mobility landscape, of whom more than 200 were involved in its creation, led by acatech.[32] In June 2023, 98 organisations were registered as MDS participants, and 20 to 24 of these are from the automotive industry.[33] The automotive industry has greater representation in the group of shareholders[34] steering the MDS' decisions regarding its direction (such as the appointment of a supervisory board and advisory board). The MDS is currently endeavouring to involve additional players, particularly also from outside the automotive industry, e.g. through potential participative formats. But, according to the MDS and the German Federal Ministry for Digital, this has so far proven to be difficult.

- The MDS' objectives are presumably shaped by the shareholders. There are doubts over the extent to which the existing objectives are compatible for the new players set to expand the MDS. These doubts are based on the fact that the participants to date have largely been pursuing economic objectives, primarily in the automotive sector, which limits the scope in which objectives apart from profit can be achieved.

- The MDS does not declare itself accountable for potential technical consequences, as it plays the role of a platform supporting joint data usage. The data sharers are the sole parties determining who can use data and for what purposes.

There should be greater participation, and the MDS shares this view. However, there remain doubts regarding the extent to which additional perspectives can be effectively incorporated later on, particularly if these are not extensively compatible with those of the established shareholders. This would have been easier to arrange earlier on.

The DI should develop agilely according to those responsible. As such, further steps are difficult to plan and predict, which in turn makes it difficult to promptly and effectively involve lobby groups. In the consultation from autumn 2022, some questions had too many requirements and were not adequately explained.[35] Others, meanwhile, were formulated too generally.[36] The effectiveness of participation is not transparent to outsiders either.[37] Going forward the DI will be implemented through open calls for tender; this has been the approach for two use cases and for the setup of the DI itself.[38] It is yet to be determined which requirements need to be met and to what extent these limit the circle of participants if, for example, they are better met by consultancy firms rather than by civil-society organisations. Contract-awarding guidelines tend to be focused on a competition between organisations that obtain and carry out contract-based projects. But this fact raises doubts as to whether public-interest-oriented players are able to adequately get involved. The requirements were discussed in a market dialogue held in July 2023 and will be published in the tender documents later in 2023.[39]

32 See the MDS's website.

33 We deem businesses to belong to the automotive industry if the bulk of their sales revenue clearly comes from automobility or if they are subsidiaries. These do not include companies that also (and often on a large scale) earn money through automobility (such as card providers and charging-station providers).

34 In addition to acatech, the other twelve shareholders are made up of three German state governments, six automotive companies (including subsidiaries) and three other businesses.

35 For example, the public consultation then distinguished between whether the DI should be more of a 'data trustee' or 'data hub'.

36 Such as the questions about which problem the DI needs to solve.

37 For example, the founding commission initially prepared use cases, with use cases simultaneously also being consulted externally. But these use cases were not adopted; they were instead redefined at the ministries.

38 German Federal Ministry of the Interior (2023), 'Konzept zum Aufbau des Dateninstituts' ('Plan for setting up the Data Institute').

39 German Federal Ministry of the Interior (2023), invitation to the market dialogue on 'Dateninstitut – Vorbereitende Arbeiten zur Gründung (Modul 3)' ('Data Institute – Pre-foundation work (Module 3))'.

- To date, the DI's **objectives** are still very broad. From a participatory perspective, it is problematic if, despite apparent participation, the objective is still defined based on political calculations because the players do not agree. It would therefore make more sense to engage in prioritisation and, in particular, explain who is participating and to what degree. Profit-oriented participants have only limited scope to contribute objectives that do not contribute to their profit.

- It is so far impossible to establish the extent to which it is realistic to involve various perspectives on **technical consequences**. These should particularly play a role when choosing the projects the ID is due to carry out/assist with.

The DI will ideally develop a clear stance on which aspects are to be established agilely and which are to be done so with plannable participation. The only way these approaches can be compatible for those politically accountable for the DI is through a lot of additional effort and expense.

Outcome

To what extent do the outcomes of digital-policy projects contribute to public interest? When assessing them, we look at whether public harm has been avoided and whether the project enhances capabilities.

Avoiding public harm

Do the projects avoid public harm, and, if so, how? We initially examine externalities, then the protection of basic rights.

Internalising externalities, including environmental sustainability

The **STF** is mindful of ensuring that no negative externalities come to bear or that its support counteracts existing externalities in the open-source ecosystem. Free open-source technologies initially create positive externalities, as they are also available to those who have not contributed to the development. Negative externalities associated with the STF funding are conceivable, because the STF aims to financially support particularly critical components of open-source technologies. This especially applies to components/activities for which financing is not profitable enough for individual businesses even though they use the technologies. In principle, businesses only contribute funding in areas where they themselves obtain adequate added value from improvements to the open-source ecosystem. If the STF were to become active in this area, businesses could further reduce their contribution, which not a desirable outcome. Furthermore, the STF is aware of not distorting the competition at an application level by focussing its funding at an infrastructural level. The STF currently does not support applications that compete against one another, but rather infrastructure that often serves similar purposes, i.e. constitutes redundancies. The intention is to reduce the dependence on individual infrastructural elements and promote resilience. Environmental sustainability is not seen as a significant factor. The STF assumes that the reusability of free open-source technologies means resources are utilised better. There is some tension between this and the supporting of redundancies. In view of this tension, it is advisable to assess the extent to which intended redundancies justify the environmental costs in the form of low resource efficiency. It is also important to keep an eye on the extent to which the funding may squeeze out private investment.

To date, there is no information to suggest that the **MDS** puts any major focus on negative externalities in general or on environmental sustainability in particular. But there is an obvious

41 Innenministerium (2023), Einladung zum Marktdialog „Datenintitut – Vorbereitende Arbeiten zur Gründung (Modul 3)".

link between mobility and environmental sustainability, and it seems there has been a missed opportunity to at least incorporate this link into the focus. It is clear that this is partly also due to the choice of shareholders, who specialise in the automotive industry. Ideally, there should be checks conducted to ascertain how the MDS will impact environmental sustainability in particular both now and in future, and how potential externalities can be highlighted and reduced.

The **DI** could internalise negative externalities by further developing the objectives and selecting the use cases, without replicating existing projects.[40] The German Energy Agency (dena) is supposed to put an energy-policy use case out for tender and assist with it. This case has the potential to help with environmental sustainability by promoting resource efficiency. Possible externalities associated with selecting use cases should be examined and avoided.

Protecting basic rights

Criticality has so far been a key criterion for **STF** in assessing the eligibility of projects for funding, i.e. the extent to which other technologies build on an infrastructure. The relevance of basic rights has not been a factor yet. Some of the projects funded during the pilot phase clearly strengthen basic rights by, for example, expanding encryption options.[41] One recommendation would be to keep an eye on the impacts the funded technologies have on basic rights and possibly include these as a criterion for assessing funding eligibility.

The **MDS** so far has not had any overt impacts on basic rights. According to the articles of association, it is 'committed to data sovereignty, data transparency and data protection', with data protection being particularly relevant to basic rights. These objectives may conflict with shareholder interests, and it remains to be seen how these will continue to be implemented. From a public-interest perspective, it is thus advisable to monitor the impacts on basic rights in the future.

Similarly to the externalities, it is still very unclear the extent to which the **DI** will account for basic rights. The combination of data use and data protection especially raises questions as to how exactly these two aspects will be reconciled. Possible impacts on basic rights need to be considered, both in terms of the DI's further structuring as an organisation and in the process for selecting implementation projects.

Strengthening capabilities

To what extent do the projects positively contribute to public interest? In particular, to what extent do they strengthen capabilities and create access to and openness in digital services and infrastructure?

Strengthening capabilities and reducing inequality

The **STF**'s aim is to better supply resources to currently underfinanced or volunteer-run open-source infrastructure, so as to ensure/improve digital public services. The availability of open infrastructures is at least one pre-requisite for less well-resourced organisations to develop and provide applications. At the same time, the STF is aware that developers, particularly in the open-source and infrastructure spaces, tend to be white males, which in turn limits perspectives of social problems and thus also defines the nature of the infrastructure. But there do not appear to be suitable remedies available, as there is no scope for quotas. In terms of internal organisation, it important to note that annual financing significantly reduces the attractiveness of positions for people needing greater job security, and thus also reduces internal diversity. The identified challenges will ideally continue to be monitored in order to utilise scope for improvement as soon as this arises.

The MDS mentions the objective of enabling even smaller players to have a share in data value. The extent to which this objective is currently being achieved is questionable, and the strong emphasis on data sovereignty[42] may even impede this, as no general rules on data

40 Wikimedia, 'Datenintitut: Ehrenamtliche Expertise nutzen!', blog post dated 19/1/2023.

41 This applies to, for example, Sequoia-PGP and OpenMLS.

42 Data sovereignty, according to our understanding, is supposed to mean that data-holders keep comprehensive control over any further use of the data.

access/sharing have been established; instead, any form of restriction is conceivable. And because smaller players have so far had little involvement in the MDS, it is unclear whether their interests will be adequately taken into account. While the MDS' articles of association establish the need for non-discrimination, it remains unclear how compliance with these rules can be traced, as the conditions for current and completed transactions are not visible, at least to the public. Ideally, the MDS will create more transparency in relation to the impacts it has on inequality in order to consider the extent to which its setup should be adjusted.

While the **DI** openly commits to focusing on public interest, it stops short of mentioning an objective or requirements for how this is to be implemented. The founding commission recommends four criteria for selecting use cases: feasibility using DI resources, feasibility in the existing legal and political framework, the potential for scaling and reuse, and political and/or social relevance.[43] Only the last point showed a loose reference to capability or inequality, using the most general possible wording in the form of the term 'relevance'. From a public-interest perspective, DI will ideally be extremely mindful of the 'Strengthening capabilities' and 'Reducing inequality' criteria when selecting use cases.

Access and openness

The **STF** aims to use its activities to explicitly support the ecosystem of open technologies. The openness of the funding itself is currently still under development, because projects were actively approached during the pilot phase. The underlying idea is to prevent only reaching those actively striving for money. The main phase sees scouting and an open application process occur simultaneously. The STF will ideally continue to monitor whether there are potential blind spots that could be covered using methods other than applications and scouting. The funded technologies themselves remain open, because the chosen licences cannot be made more restrictive down the track.

At the **MDS**, there is a clear tension between the aspiration of strong data sovereignty on the one hand and openness on the other. Data is explicitly not shared openly, but rather restrictively. The data catalogue is similarly not openly viewable, but requires interested parties to register. According to the MDS, participants are open to this. To date, however, there has not been any case of rejection/non-acceptance, rendering it unclear as to which criteria are (or can be) applied and who determines this. The articles of association also establish the fact that potential standardisation initiatives 'need to follow the principles of transparency and openness'. The MDS' results to date should be made more accessible, including the data catalogue.

It is so far unclear the extent to which the **DI** ensures access for various groups or strives to make its results open. Of particular interest at present is the extent to which the procurement of the two use cases and organisational structure is transparent and accessible for various players. Distributing the monies in a framework contract would be the easiest solution, but would only benefit a closed circle of established, profit-oriented service providers. According to the responsible ministries, they want to opening out to other players, such as organisations and individuals from civil society,. This is seen as a challenge, as a procurement process is likely to pit these sorts of players against profit-oriented service providers, and established procurement criteria are hardly conducive to assessing more public-interest-oriented players. Ideally, the process for choosing the parties to implement the DI and its use cases will significantly take into account public-interest orientation and anticipate areas where public interest creates tension with profit interests. Work outputs, such as DI studies, data and documentation, should be made available as openly as possible.

43 The concept paper establishes four additional criteria: possible completion within a year, not squeezing out existing initiatives, a broad base of lobby groups, and solutions in the interests of the DI's missions. The broadness of the lobby-group base could focus on access as a criterion, but this is currently unclear.

Dynamic: collective administration and modernisation

To what extent are the projects focused on public interest for the long term, and is this focus constantly reviewed?

The **STF** expressly emphasises the fact that gaining knowledge is central to the current phase: Testing hypotheses is the main focus for iteratively improving funding activity. There is a distinct desire to adapt commenced activities and enhance them with new ones in order to appropriately assist the dynamic development of the open-source ecosystem. In addition to scouting and applications, there are mechanisms in the pipeline to continue incorporating external expertise through formal and informal formats. What remains unclear is which organisational form the STF will take if it separates from the SPRIND in order to remain as independent as possible and play a longer-term role in the ecosystem. The STF will ideally adopt an organisational structure that ensures the funding to date is as permanent and lasting as possible, while remaining able to adapt to dynamic technical development.

The **MDS** is exempt from charges until the end of 2024, after which the aim is to achieve cost-covering development. Its (non-public) articles of association do not allow for a long-term profit focus, even though the MDS exists in the legal form of a GmbH (LLC). According to the MDS, this was chosen in order to facilitate fast implementation with a highly flexible, familiar legal form. But it remains unclear the extent to which the MDS is able to successfully involve additional participants and thus achieve greater acceptance; there does not appear to be a defined path. It should adopt a clear stance on the extent to which additional players and public-interest interests will play a role, so it can then define how such a stance can be implemented.

The **DI** is not currently defined enough to assess the extent to which dynamic development involving various perspectives is possible. The next steps will determine how and by whom future implementation projects will be selected and the DI set up as an organisation. These steps are critical for devising a central mission, as well as ways of adapting and expanding these. The requirements listed here for a public-interest focus will ideally be established for as long a term as possible.

8 public-interest factors in practice: how Wikimedia implements the requirements

To demonstrate how the requirements for public interest in digital policy can be put into practice, and to provide suggestions, we also evaluated the projects being conducted by Wikimedia Deutschland and the global volunteers' community. We asked how they are implementing the eight requirements for public interest in the digital space and what challenges this involved.

We discussed this with participants from different Wikimedia teams at internal workshops. The examples come from

- The Software Development team, which, among other things, further develops the software for Wikipedia, Wikidata and Wikibase;
- The Communities & Engagement team, which supports the community of over 7000 active German-speaking volunteers;
- The Movement Strategy & Global Relations team, which looks after the strategic further development of the Wikimedia movement and networking with the worldwide community;
- The Policy and Public Sector team, which advocates better framework conditions for free knowledge and digital volunteering;
- The Education, Science and Culture team, which inspires and raises awareness among cultural, memory and educational institutions to open up their content.

The examples are designed to serve as suggestions for how public interest can be implemented in digital projects and policies. But they also highlight challenges. It is by no means an exhaustive selection. The Meta-Wiki, in which the global Wikimedia community openly plans, co-ordinates, documents and analyses its projects, is a virtually inexhaustible source of examples for structuring the digital space in a manner focused on public interest.

Transparency at Wikimedia

Software development for Wikidata

The team achieves transparency in various ways to ensure the Software Development team's products meet the community's needs: The developers use the public Wikidata Development Roadmap to announce the planned software projects every year. Volunteers can share feedback through the discussion page. Interested parties receive regular updates on Wikidata through the office hour or in the Wikidata Telegram Group. The newsletter covers other needs for information on the state of affairs. And the Phabricator platform enables volunteers to report wishes or errors to the Software Development team and openly view the progress of the various error reports.

Wikipedia, the free encyclopaedia

Wikipedia shows how radical transparency works: every change to an article is traceable via the version history. Transparency also applies to discussions on disputed article content, the relevance criteria and the criteria for encyclopaedic writing or the use of bibliographies and sources. The high degree of transparency in Wikipedia fosters trust in the

content. But it also highlights two challenges: Firstly, anyone wanting to get involved needs to take the time to study rules; secondly, the extensive list of conventions may be intimidating and thus require explanation. The community offers this through various measures, such as mentoring and even telephone consulting.

Policy and Public Sector team

Wikimedia Deutschland supports a community that stands for open access to free knowledge – financed primarily through contributions by over 100,000 members and donations. It is therefore clear that the Policy and Public Sector team, which advocates for better political and institutional conditions and policies for free knowledge, digital volunteering and open data, does this openly. Every three months, the team publishes a transparency report documenting its policy work. Even the changes the team is working on every year and the individual members are visible to everyone. This of course also means members are able to ask questions or express criticism. Responding to this requires human resources. But it also provides a platform for explaining the team's work, making it traceable and receiving tips and ideas from members.

The Wikimedia Movement Strategy 2030

The global strategy process started by the Wikimedia movement in 2017 is one of radical transparency. For a complex process seeking to involve and represent the various interests of groups from five continents, openness is indispensable. What exactly does that mean? Not just the strategy itself, but also interim results from 4 cycles are openly accessible, as are all influences on content. These include the syntheses of over 100 community discussions, research reports from the Wikimedia Foundation on technological and social trends and on Wikimedia communities, and talks with experts from science, the media, politics and technology on all five continents. The Movement Strategy Weekly or Movement Strategy and Governance Newsletter, released quarterly, continuously keep participants informed. The result is ten recommendations designed to help Wikimedia become the foundation of the free-knowledge ecosystem by 2030.

The Movement Charter Drafting Committee (MCDC)

Openness is the central characteristic of the Wikimedia movement.This is also evidenced by the high degree of transparency in the formulation of the Movement Charter. Since 2021, the Movement Charter Drafting Committee (MCDC) has been working with volunteers and employees from all over the world to prepare this governance document. Interested parties can follow and be involved in the entire process in the public Meta-Wiki, where the MCDC advises the schedule for the strategy process, as well as the rules and processes of internal decision-making. Every month, the latest issues– as well as outstanding questions and problems – are documented. The MCDC doesn't just publish results. Drafts of specific sections of the Charter are just as visible as feedback from the community, which is used to make adjustments. The committee uses various channels to provide updates on its activities, including monthly reports and a monthly newsletter or 'office hours'.

Community portal

The Community und Engagement team, which supports the over 7000 regularly active volunteers in the Wiki projects, considers transparency as a means of making its work traceable and more effective. This requires more than just a organizational chart. Accordingly, the community portal lists specific contact persons,their individual responsibilities and contact details. Plus, there is a clear description of the philosophy and shared values within the community collaboration and the various roles of the WMDE employees. These are: financiers, moderators, advisors, process facilitators, organisers and much more. While this cannot prevent misunderstandings or conflicts, it does ensure volunteers know what

they can expect from the team. And clear responsibilities make it easier for the members of the Community teamto understand their own work, because they know what expectations they realistically need to fulfill. This transparency additionally enables them to distinguish realistic expectations from unrealistic ones.

Effective participation

Technical Wishes

The project connects the Software development team with the volunteer community to create better technical functions. Participation starts with a survey which is used to establish an area of focus for two years. Specific problems the software developers are working on are then identified through interviews or workshops with the volunteers. The Software Development team also explains how technical wishes are selected, namely the benefit, expense and likelihood of success of a project.

The Wikimedia Movement Strategy 2030

The Movement Strategy has seen the global Wikimedia movement set ten targets for its development until 2030. To appropriately involve the different communities, the participation opportunities need to cater to the varying communication habits, time resources and interests. The volunteers have become involved in global conversations or through themed clusters. The Movement Strategy Forum provides a digital platform for constant exchange. Whether it be hybrid, online or analogue, with two participants or 200, almost every format was covered. Volunteers and paid full-time workers used the Playbook to document the lessons they learnt for participation.

The Communities & Engagement team

To ensure effective support for the many volunteers in the Wiki projects, this support needs to be geared around the needs of the volunteer community. That's why the community is also involved when it comes to the question of: how do we support you? What works well and what doesn't? One tool for this is the Support Barometer. Wikimedia uses LamaPoll for this – a platform hosted in Germany and with which WMDE maintains a GDPR agreement. The team wants the survey to identify what support works for the community and what needs to be different. It will also collect information on which groups are catered to particularly well by the support, and which are not. Another tool is the Community Forum, a discussion format for the joint work performed by volunteers and full-time employees. The online workshop series, meanwhile, focuses on dialogue and the common work performed by volunteers and full-time employees.

Movement Charter Drafting Committee (MCDC)

One important pre-requisite for effective participation is that of involving people with varying communication habits. The fastest or loudest are not the only lobby groups with valuable experience or legitimate perspectives. The MCDC, which leads the global process for the Wikimedia Charter, achieves broad involvement through larger Q&A sessions or discussions (digital, analogue and hybrid). Wikimedians also have the option of participating anonymously and in writing. They can contribute input by email, via a Telegram channel or as part of the office hours.

Protecting basic rights and avoiding public harm

Policy team and the F5 alliance

Basic rights are constantly at risk in the digital space because of the way digital services and products operate. We are seeing platforms and networks that are not doing enough, and are not being transparent, in combating threats, abuse and racism and the other forms of discrimination. But many experts believe digital policy projects such as the latest plans for 'CSAM regulation, know in Germany as „chat control", also breach basic rights. The Policy and Public Sector team – including in the F5 alliance – advocates bolstering basic-rights perspectives in the digital discourse. The formats include parliamentary breakfasts where MPs raise awareness about the consequences of digital-policy projects. As part of the Monsters of Law series of talks, experts discuss legal matters in lay terms. And we use policy briefs to incorporate perspectives from civil society into the political process.

The Movement Strategy 2030

To help prevent structural, social and economic inequalities from the analogue space from being reproduced in the digital space, one of the objectives of the Wikimedia 2030 strategy is to ensure equity in decision-making. What exactly does that mean?

- The movement collectively defines rules, structures, roles and responsibilities.
- Decisions affecting the movement need to be based on collaboration and broad involvement.
- The movement must define rules for distributing resources, establish accountability and define the participants' rights and roles.

In future, a global council comprising a representative set of movement members will be set up and will work in consultation with the movement to implement the strategy.

Linked Open Data strategy

As the data objects in Wikidata are structured and machine-readable, and are also licensed under CC-0, they can be used worldwide and constantly be relinked, hence the talk of Linked Open Data. A large community of volunteers and Wikimedia employees are helping improve data quality and increase the number of data objects. The Wikidata community is also working on more diversity and thus more representative and diverse data sets. Wikidata is used to train voice assistants, as well as artificial intelligence. The German National Library uses Wikidata to make its information on German-language works accessible. The aim of the Linked Open Data strategy is to preserve this open and free system and thus promote sustainable, beneficial and open data usage.

Reducing inequality

The Communities & Engagement team

Open online spaces like Wikipedia enable all sectors of society to share knowledge. In theory. In reality, participative digital processes alone are not able to eliminate social or economic inequalities. Wikimedia Deutschland cannot eliminate them either. But we can try and mitigate negative effects on digital volunteering. That's why WMDE offers a range of different support options, including covering costs for care work for Wikipedians wanting to participate in a conference or other project promoting or widening free knowledge. And with the 'Förderung bewerben' project, the Community and Engagement team actively approaches volunteers and informs them of support options. Meanwhile, WMDE covers the travel costs of Wikipedians wanting to travel to edit-a-thons, take photo tours or undertake further training.

Strengthening diversity in Wikimedia projects

There are 315 active language versions of Wikipedia. Even people who speak Tagalog or Hakka can access or expand on free knowledge, because anyone can edit articles in Wikipedia. It is true, however, that not all sectors of society are part of the volunteers' community to a representative degree. This is highlighted by the work of groups like FemNetz, which advocates more visibility for women's biographies in Wikipedia and tries to encourage more women to collaborate in the free encyclopaedia. Through its re*shape programme, WMDE wants to help ensure people from underrepresented groups also contribute to the free knowledge. 'People and communities negatively impacted by racism' can receive financial or organisational support, or support in the form of ideas. The only pre-requisite is that the projects need to be aimed at using free licences and free-knowledge platforms – such as Wikipedia, Wikimedia Commons or Wikidata – to spread marginalised knowledge.

The Movement Charter Ambassadors

The Movement Charter is the central governance document for the global Wikimedia movement. Not all members of local communities and projects have the same staffing, organisational and time resources to participate in this process. The interface role that is the Movement Charter Amabassadorship was created to combat this. This involves volunteers and employees who collect input for their region, city or a specific project through community conversations and incorporate this into the charter-drafting process.

Openness

MediaWiki

MediaWiki is the knowledge-management system behind Wikipedia. Itis freely available as a software. Anyone can download Media-Wiki and thus organise knowledge and make it accessible. Companies and authorities like NASA, Intel and the Mecklenburg-Vorpommern State Office for the Environment use MediaWiki. The software is the basis for various city information portals, such as the FürthWiki. The Zentrale für Unterrichtsmedien im Internet uses MediaWiki to provide open educational ressources. Each Wiki can be open or only accessible for registered users.

Wikipedia & co

The worldwide community that contributes to Wikipedia, Wikidata, Wikimedia Commons and other knowledge projects is very diverse. But it is united by one goal: making more knowledge, data or media available freely and digitally. That's why it has been agreed that only content licensed under CC-0, CC-BY or CC-BY SA can be included in the projects. This makes the knowledge and Wikidata database reusable – for private, governmental, commercial or scientific purposes and at educational institutions. This does not mean that content can be repurposed totally randomly or indeed defaced under CC or CC-BY licences. This brochure explains what exactly the licences permit and what they do not.

The 'Freies Wissen' ('Free Knowledge') fellowship programme

For five years, Wikimedia Deutschland provided grants, workshops and mentoring to help young researchers make their research and teachings accessible even beyond the university space. Together with the Stifterverband and the VolkswagenStiftung, a total of 90 researchers from Germany, Austria and Switzerland were supported in implementing the principle of open science. The final report shows the outcomes of the programme, which included the researchers being able to build on individual open-science competencies. The programme's network formats help the open-science community to grow. The supported fellows incorporate the principles and their acquired skills at research institutes, thereby encouraging openness in institutional practice.

Access to digital infrastructure and services

Community support & mentoring programme

A lack of access to software, hardware or digital services can pose an obstacle to active collaboration in Wikipedia. The support services offered by the Communities and Engagement team thus also include software grants, technical equipment for hire and the Wikipedia Library, which give volunteers access to digital databases and literature. To make the volunteers' community more diverse, the FemNetz group of volunteers takes various measures in a bid to 'help promote a welcoming culture in Wikipedia to ensure it remains accessible and worth reading for all kinds of people even in future.' FemSupport, meanwhile, assists novices with editing, and WomenEdit helps fill gaps in Wikipedia.

Wikibase Cloud

Wikibase is the software that serves as the basis for one of the largest free and open databases: Wikidata. Wikimedia developed the Wikibase Cloud platform to ensure even users with minimal financial resources or technical know-how are able to set up their own databases. Wikimedia takes care of hosting, and even data holders who are not professionals are able to install it. There are also tutorials on topics such as data-modelling to enable as many people as possible to use it. It is currently a beta service, and interested parties can register here for early access.

Implementing dynamic considerations

Software development – Wikidata

The Software Development team uses various mechanisms to try and ensure the Wikidata project remains focused on public interest over the long term. 'Make a wish, doesn't matter what it's for. It could even be something unrealistic like "I want a pink pony"'. This is the motto for the Pink Pony Session held at WikidataCon. It is based on the assumption that participation needs to be able to inspire and that there is no utopia without change. The ideas from the sessions are visible to the public here. The Bug Triage Hour, in which Wikidata's product-management employees publicly work on a problem report or query, has been held every two to three months since 2021. Volunteers can share live input and requests. Every Bug Triage Hour is documented in a running Etherpad.

The Support Barometer

Wikimedia Deutschland supports the activities of the volunteers' community with various measures, whether these are financial, organisational or in the form of ideas. The Support Barometer is used to regularly check whether the support instruments meet the relevant needs. Every quarter since 2017, the Communities and Engagement team has been ascertaining who is using which support services, what is working and what isn't, and what additional services the volunteers would like. The reports are available for viewing by the public.

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We have tried to include and incorporate as many different perspectives of public interest and digitisation as possible. This includes a wide range of parties and ministries, associations and scientific disciplines. For each of the digital-policy projects examined, we spoke to at least one person from the administrative side and one from the implementation side and gave them an opportunity to comment.

About Wikimedia Germany

Wikimedia Deutschland is a non-profit association with over 100,000 members that promotes free knowledge. Since its foundation in 2004, the association has supported various Wikimedia projects - first and foremost Wikipedia.

The association advocates free access to free knowledge and is committed to a fundamental human right to education. Wikipedia, like other sister projects, is independent and free of advertising and is only possible through voluntary work and donations.

If you have any questions or would like to discuss the contents of the policy paper, feel free to contact Aline Blankertz, advisor policy & public sector, aline.blankertz@wikimedia.de.

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