



Index of Digital Political Participation  
SWITZERLAND

# DIGIPART INDEX 2025 SWITZERLAND

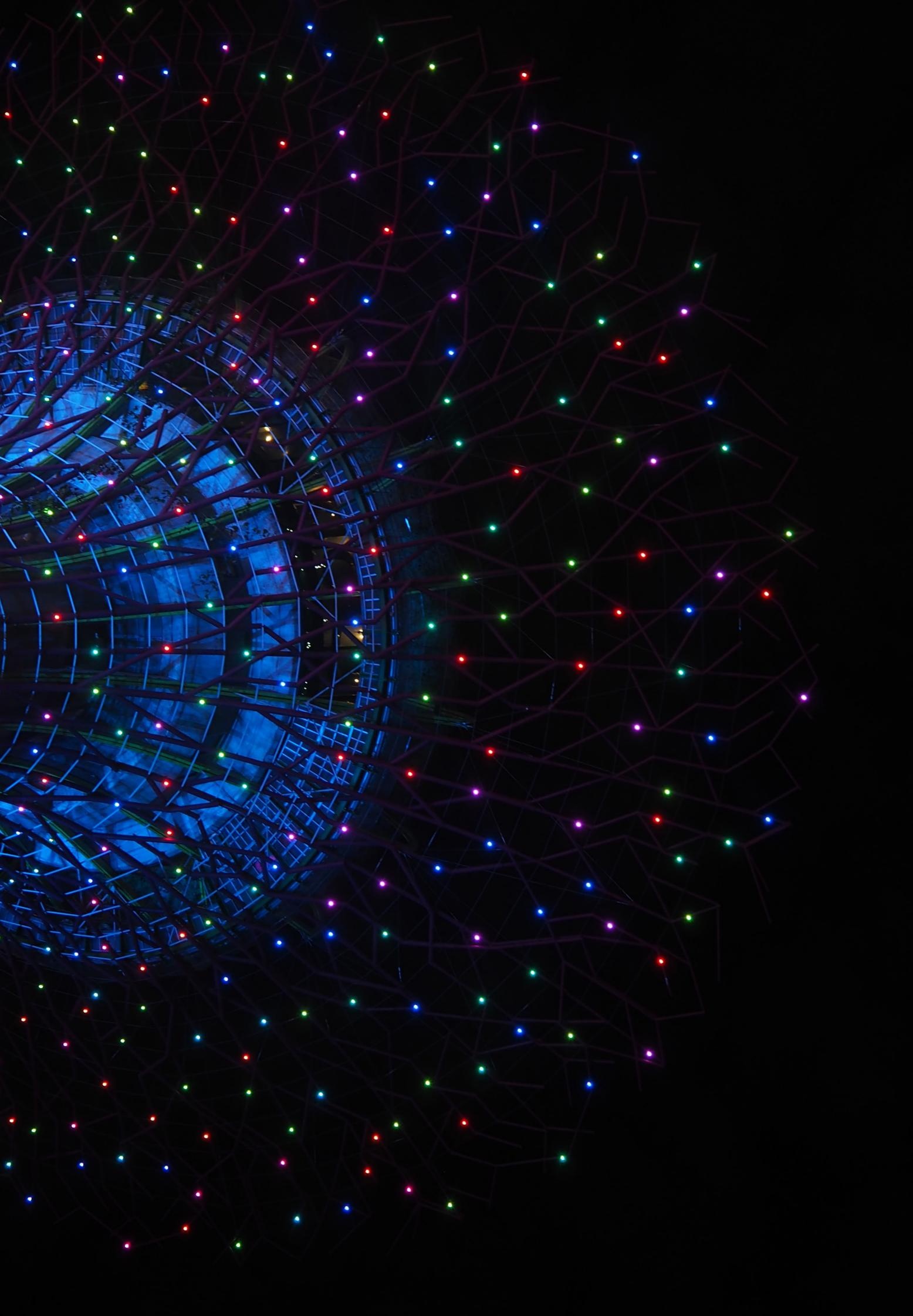
**Uwe Serdült**

**Costa Vayenas**

**Herveline Du Clary**

**Gabriel Hofmann**





## Table of contents

<b>EXECUTIVE SUMMARY .....</b>	<b>7</b>
English.....	7
Deutsch.....	9
Italiano .....	11
Français.....	13
<b>INTRODUCTION .....</b>	<b>15</b>
<b>DIGITAL POLITICAL PARTICIPATION .....</b>	<b>19</b>
<b>INDEX FORMATION .....</b>	<b>23</b>
Dimension 1 - Opinion formation.....	24
Dimension 2 - Participation .....	27
Dimension 3 - Decision .....	29
<b>DATA AND METHOD .....</b>	<b>33</b>
<b>RESULTS .....</b>	<b>37</b>
<b>DISCUSSION .....</b>	<b>43</b>
<b>LITERATURE .....</b>	<b>47</b>
<b>APPENDIX .....</b>	<b>51</b>
Team.....	51
Documentation Coding .....	52
Raw data .....	66
Flowcharts Coding .....	68
<i>Flow Chart T1 - e-Deliberation</i> .....	68
<i>Flow Chart T2 - e-political education</i> .....	70
<i>Flow Chart T3 - e-Transparency</i> .....	72
<i>Flow Chart T4 - e-consultation</i> .....	74
<i>Flow Chart T5 - e-Concerns</i> .....	76
<i>Flow Chart T6 - e-Identification</i> .....	78
<i>Flow Chart T7 - e-Voting</i> .....	80
<b>IMPRINT .....</b>	<b>82</b>

Image from Andrew Kow via Unsplash

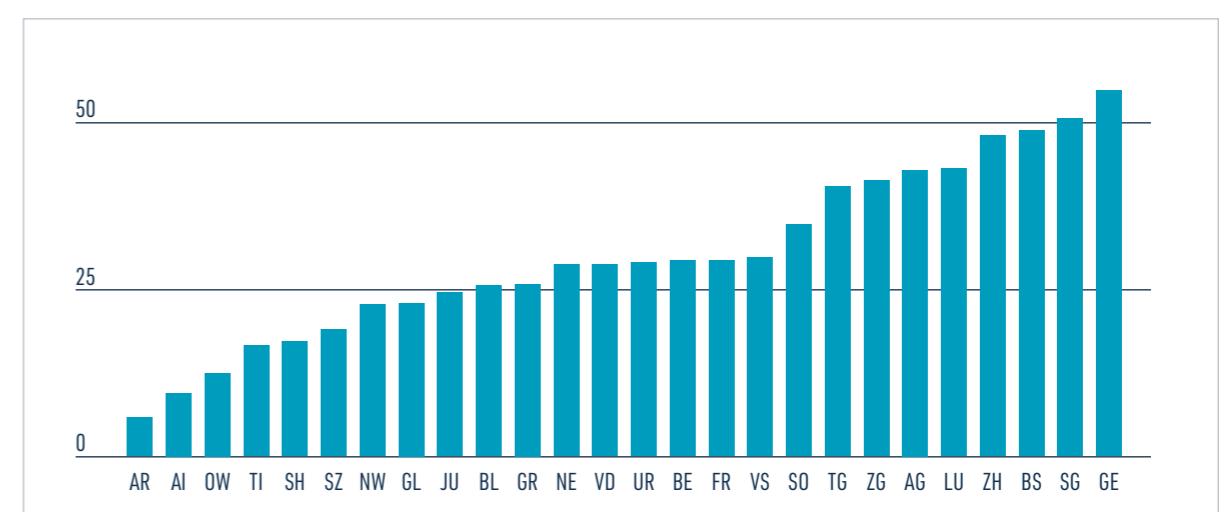


## Executive Summary

### ENGLISH

A newly created index records the extent to which it is possible to participate digitally in the political process in Swiss cantons on a scale of 0 to 100. Digital political participation is measured with the help of seven indicators covering three dimensions: opinion-forming, participation, and decision-making. The ranking of the cantons shows that there is still a lot of room for improvement. The highest score is achieved by the Canton of Geneva with 55 points. The index was launched by the Centre for Democracy Studies Aarau (ZDA) and the Procivis Think Tank, supported by the Mercator Foundation Switzerland.

Digital political participation increasingly complements analogue forms of political participation. Elements of the political process such as dialogue, consultation, participation as well as voting have received a further digital boost in the current pandemic. Because they reflect the new digital experiences of ever broader sections of the population, using digital means to participate in the political process will play an increasingly important role in the future. The Centre for Democracy Studies Aarau and the Procivis Think Tank are, therefore, introducing an index for Switzerland that measures digital political participation and maps cantons in a comparable way. Such a monitoring system does not yet exist for Switzerland.



Index Digital Political Participation Switzerland 2021: Values for all Swiss cantons on a scale from 0-100

Picture by Rodion Kutsaev via Unsplash

Digital political participation is recorded with the help of an index in a standardised value range. The values for the Index of Digital Political Participation Switzerland (“DigiPartIndex Switzerland”) range from 0 to 100 points. The differences between the cantons are considerable, ranging from a minimum of 6 and a maximum of 55 points. The mean value is 31 points. The ranking tends to be led by cantons with a large population and greater financial resources. However, even the cantons at the top of the index still have room for significant improvement in all areas.

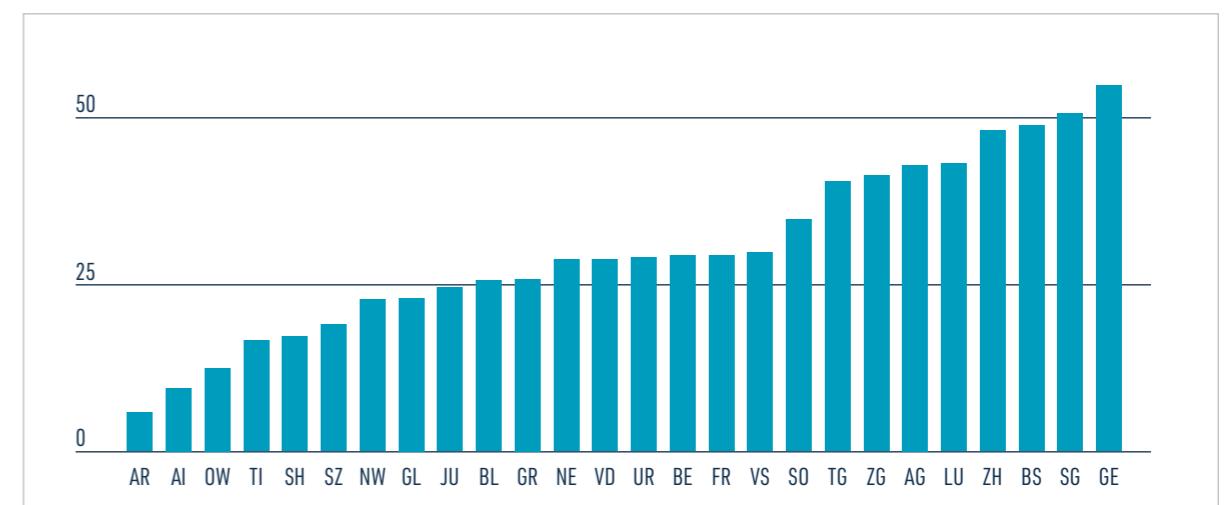
The index measures three dimensions of digital political participation. The first dimension reflects how political decision-making in democracies is preceded by an opinion-forming phase. It covers tools for e-deliberation, digital political education, and e-transparency. The second dimension, participation, maps the institutionalised exchange between government agencies and civil society. The two components, e-consultation and e-requests, are surveyed for this purpose. Thirdly, in addition to public debate and an exchange between the state and society, tools can also be used to enable the act of voting and electing digitally. To this end, the foundations must be laid in the form of electronic identification, i.e. an e-ID, so that it can then be used for e-voting and e-collecting, among other things. Bonus or penalty points can be awarded for additional criteria such as use, user group, user-friendliness and diversity.

The index is updated annually. The report and data sets are available on the website <http://digipartindex.ch/en/>.

## DEUTSCH

**Ein neu geschaffener Index erfasst auf einer Skala von 0 bis 100, inwiefern es in Kantonen der Schweiz möglich ist, sich digital am politischen Prozess zu beteiligen. Gemessen wird digitale politische Partizipation mit Hilfe von insgesamt sieben Indikatoren für die drei Dimensionen Meinungsbildung, Mitwirkung und Entscheidung. Im Ranking der Kantone wird ersichtlich, dass gegen oben noch viel Luft ist. Den höchsten Wert erreicht der Kanton Genf mit 55 Punkten. Lanciert wird der Index vom Zentrum für Demokratie Aarau (ZDA) und dem Think Tank von Procivis, unterstützt von der Stiftung Mercator Schweiz.**

Digitale politische Partizipation ergänzt zunehmend analoge Formen politischer Beteiligung. Elemente des politischen Prozesses wie Dialog, Konsultation, Beteiligung sowie Abstimmen und Wählen im digitalen Raum haben gerade in Zeiten von COVID-19 wieder einen Schub erhalten. Weil sie den neuen digitalen Lebenswelten und -erfahrungen immer breiterer Bevölkerungskreise entsprechen, werden sie in Zukunft eine immer wichtigere Rolle spielen. Das Zentrum für Demokratie Aarau und der Procivis Think Tank führen deshalb für die Schweiz einen Index ein, der digitale politische Partizipation erfasst und Kantone vergleichbar abbildet. Ein solches Monitoring gibt es für die Schweiz noch nicht.



Index Digitale Politische Partizipation Schweiz 2021: Werte für alle Kantone der Schweiz auf einer Skala von 0-100

Digitale politische Partizipation wird mit Hilfe eines Index in einem standardisierten Wertebereich erfasst. Die Werte für den DigiPartIndex Schweiz reichen von 0 bis 100 Punkten. Die Unterschiede zwischen den Kantonen sind beträchtlich. Erzielt wurden minimal 6 bis maximal 55 Punkte. Der Mittelwert beträgt 31 Punkte. Tendenziell führen bevölkerungsreichere und finanzstärkere Kantone das Ranking an. Auch die an der Spitze liegenden Kantone können sich jedoch noch in allen Bereichen deutlich verbessern.

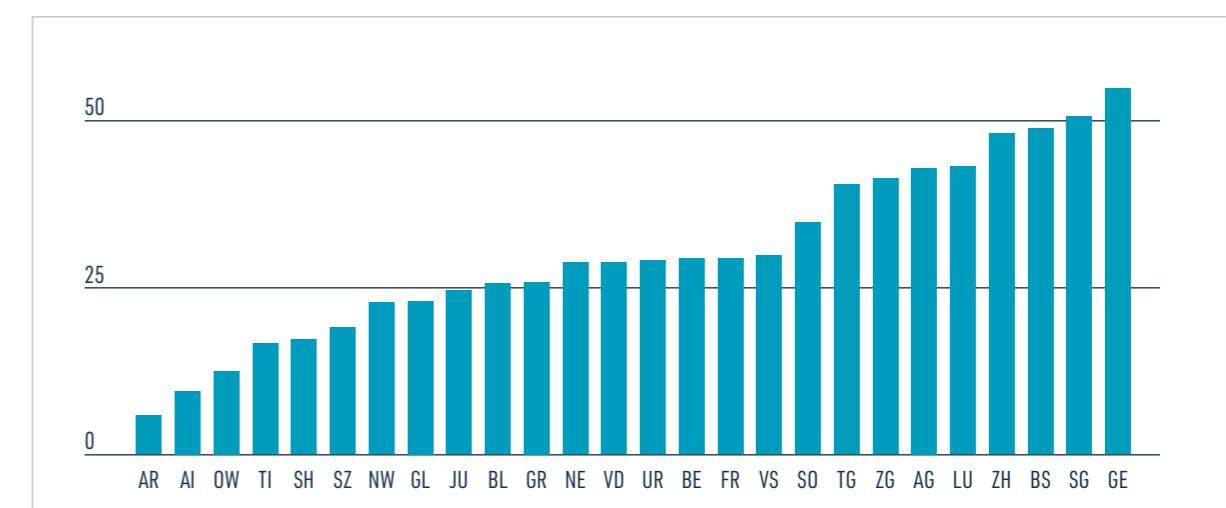
Der Index misst drei Dimensionen der digitalen politischen Partizipation. In der ersten Dimension wird abgebildet, dass politischen Entscheiden in Demokratien eine Phase der Meinungsbildung vorangeht. Erfasst werden dabei Tools für e-Deliberation, digitale politische Bildung und e-Transparenz. Mitwirkung als zweite Dimension bildet den institutionalisierten Austausch zwischen staatlichen Stellen und der Zivilgesellschaft ab. Hierzu erhoben werden die beiden Komponenten e-Konsultation und e-Anliegen. Neben der öffentlichen Debatte und einem Austausch zwischen Staat und Gesellschaft können drittens auch Werkzeuge zum Einsatz kommen, die den Akt des Abstimmens und Wählens digital ermöglichen. Dazu müssen die Grundlagen in Form einer elektronischen Identifikation, also einer e-ID, geschaffen werden, um dann unter anderem auch für das e-Voting sowie e-Collecting zum Einsatz kommen zu können. Für zusätzliche Kriterien wie Gebrauch, Nutzerkreis, Benutzerfreundlichkeit und Vielfalt können Bonus- oder Maluspunkte vergeben werden.

Der Index wird jährlich aufdatiert. Bericht und Datensätze sind auf der Webseite <http://digipartindex.ch> abrufbar.

## ITALIANO

**Un indice, creato recentemente, regista il grado in cui è possibile partecipare digitalmente al processo politico nei cantoni svizzeri su una scala da 0 a 100. La partecipazione politica digitale è misurata con l'aiuto di un totale di sette indicatori per le tre dimensioni: formazione delle opinioni, partecipazione e processo decisionale. La classifica dei cantoni mostra che c'è ancora molto margine di miglioramento. Il punteggio più alto è raggiunto dal cantone di Ginevra con 55 punti. L'indice è stato indetto dal Centro per gli studi sulla democrazia di Aarau (ZDA) e dal think tank Pro civis, sostenuto dalla Fondazione Mercator Svizzera.**

La partecipazione politica digitale completa sempre più le forme analogiche di partecipazione politica. Gli elementi del processo politico come il dialogo, la consultazione, la partecipazione, così come il voto e l'elezione in sistemi digitali, hanno ricevuto un nuovo impulso soprattutto durante il COVID-19. Poiché essi corrispondono ai nuovi mondi di vita digitale e alle esperienze di fasce sempre più ampie della popolazione, avranno un ruolo sempre più importante in futuro. Il Centro per gli studi sulla democrazia di Aarau e il Pro civis Think Tank stanno quindi introducendo un indice per la Svizzera che regista la partecipazione politica digitale e mappa i cantoni in modo comparabile. Un tale sistema di monitoraggio non esiste ancora per la Svizzera.



Indice di partecipazione politica digitale Svizzera: valori per tutti i cantoni svizzeri su una scala da 0 a 100

La partecipazione politica digitale è registrata con l'aiuto di un indice in una gamma di valori standardizzati. I valori per il DigiPartIndex Svizzera vanno da 0 a 100 punti. Le differenze tra i cantoni sono notevoli. Sono stati ottenuti da un minimo di 6 a un massimo di 55 punti. Il valore medio è di 31 punti. La classifica tende ad essere guidata dai cantoni con una maggiore popolazione e con finanze più forti. Tuttavia, anche i cantoni in cima alla classifica, possono ancora migliorare significativamente in tutti i settori.

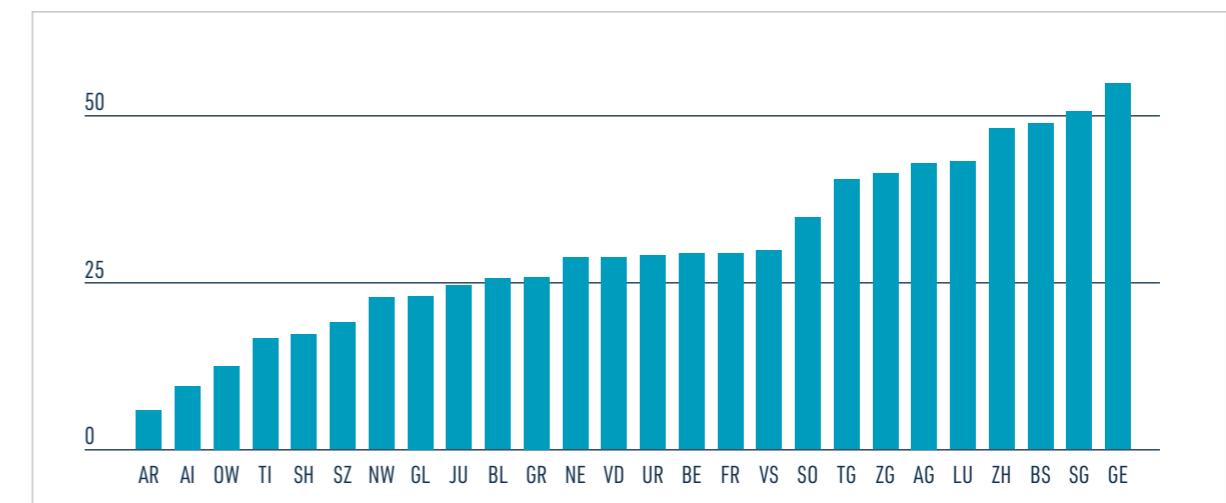
L'indice misura tre dimensioni della partecipazione politica digitale. La prima dimensione mostra che le decisioni politiche nelle democrazie sono precedute da una fase di formazione dell'opinione. Ricopre strumenti per l'e-deliberazione, l'educazione politica digitale e l'e-trasparenza. La seconda dimensione, ossia la partecipazione, mappa lo scambio istituzionalizzato tra le agenzie governative e la società civile. I due componenti e-consultation ed e-concerns vengono rilevati a questo scopo. In terzo luogo, oltre al dibattito pubblico e allo scambio tra lo Stato e la società, si possono usare strumenti che abilitano digitalmente l'atto di votare ed eleggere. A tal fine, le basi devono essere poste sotto forma di identificazione elettronica, cioè una e-ID, in modo che possa poi essere utilizzata per il voto elettronico così come per la raccolta elettronica, tra le altre cose. Punti bonus o penalità possono essere assegnati per criteri aggiuntivi come l'uso, la cerchia di utenti, la facilità d'uso e la diversità.

L'indice è aggiornato annualmente. Il rapporto e le serie di dati sono disponibili sul sito web <http://digipartindex.ch>.

## FRANÇAIS

**Un indice nouvellement créé mesure, sur une échelle de 0 à 100, les possibilités de participer numériquement au processus politique dans chaque canton suisse. Cette participation politique numérique est déterminée par un total de sept indicateurs, pour trois dimensions que sont la formation de l'opinion, la participation et la prise de décision. Le classement des cantons est sans appel: il y a encore une grande marge de progression. Le canton de Genève a obtenu le meilleur score avec 55 points. L'indice a été lancé par le Centre d'études pour la Démocratie Aarau (ZDA) et le think tank Procivis, soutenus par la Fondation Mercator Suisse.**

La participation politique analogique est de plus en plus complétée par des formes numériques. Les éléments du processus politique tels que le dialogue, la consultation, la co-création ainsi que le vote et l'élection dans l'espace numérique ont reçu un nouvel élan, en particulier en temps de COVID-19. Ces éléments joueront un rôle de plus en plus important à l'avenir, car ils correspondent aux nouveaux univers de vie numériques et aux expériences de segments grandissants de la population. Le Centre d'études pour la Démocratie Aarau et le think tank Procivis présentent donc un indice suisse qui enregistre la participation politique numérique, et cartographie les cantons de manière comparée, un système de suivi inédit pour la Suisse.



Index de participation politique digitale en Suisse : valeurs pour les cantons sur une échelle de 0 à 100

La participation politique digitale est enregistrée à l'aide d'un index dans une fourchette de valeurs standardisées. Les valeurs pour le DigiPartIndex Switzerland vont de 0 à 100 points. Les différences entre les cantons sont considérables. De 6 à 55 points ont été atteints et la valeur moyenne est de 31 points sur 100. Le classement est plutôt mené par les cantons à grande population et aux finances solides. Mais même les cantons les plus performants peuvent encore s'améliorer sensiblement dans tous les domaines.

L'indice mesure trois dimensions de la participation politique numérique. La première dimension montre que les décisions politiques dans les démocraties sont précédées d'une phase de formation de l'opinion. Cette première dimension couvre les outils de délibération en ligne, d'éducation politique numérique et de transparence en ligne. La deuxième dimension, celle de la cocréation, représente l'échange institutionnalisé entre les agences gouvernementales et la société civile. Les deux composantes e-consultation et e-demandes y sont étudiées. Troisièmement, outre le débat public et l'échange entre l'État et la société, il est possible d'utiliser des outils qui permettent de voter et d'élire numériquement. À cette fin, il faut poser les bases d'une identification électronique, ou e-ID, afin qu'elle puisse être utilisée, entre autres, pour le vote et la collecte électroniques. À noter que des points de bonus ou de pénalité peuvent être attribués pour des critères supplémentaires tels que l'utilisation, l'inclusion, l'ergonomie et la variété.

L'indice sera mis à jour chaque année. Le rapport et les ensembles de données sont disponibles sur le site web <http://digipartindex.ch/fr/>.

Digital political participation increasingly complements analogue forms of political participation. Elements of the political process such as dialogue, consultation, participation as well as decision-making in the digital space were boosted again during the COVID-19 pandemic. Because they reflect a new digital way of life and experiences, we can assume that they will continue to play an important role in the future. Also in the context of so-called "smart cities", digital governance is being experimented with globally with the accompanying new tools and shared learnings. This trend is particularly dynamic at the subnational level and in large cities.

We are, therefore, contributing to this global trend by introducing an index for Switzerland that records digital political participation and maps cantons in a comparable way. Such a monitoring system does not yet exist for Switzerland. We believe that it can serve as an incentive to experiment further in the field of digital participation in Switzerland.

The concept of digital political participation is measured with the help of an index in a standardised value range from zero to 100. The emphasis is on those digital tools that enable or are conducive to effective political participation. We will initially cover all Swiss cantons, but plan to expand this analysis to selected cities and other countries.

By creating, annually updating and publishing an *Index of Digital Participation Switzerland* at the level of the cantons, this project helps to raise awareness of new digital opportunities in the political process. Indirectly, rankings and comparisons between territorial units promote mutual learning in the sense of healthy competition.

They allow cantons to discover, from each other, new digital participation opportunities. Digital processes and tools that are available are made visible to both politicians and potential users. Transparency increases the chances that political forces in a canton or city will take up the issue and put it on the agenda.

We assume that the *Index Digital Participation Switzerland* will indirectly lead to feasibility studies and pilot phases prior to the introduction of a new digital participation instrument and thus contribute to improving the framework conditions for democratic participation via digital platforms in Switzerland.

Switzerland is pursuing a comprehensive digitisation strategy that includes both e-government and e-participation (Federal Council 2020). The decentralised, federal system with a highly participatory, direct-democratic political culture is both an advantage and a disadvantage here. The danger of fragmentation and frictional losses in the federalist state structure finds its counterpart in the possibility of experimentation in its sub units. In recent years, the political debate has revolved primarily around the topics of e-voting, e-collecting and e-ID. This is one of the reasons why a diverse literature has emerged that deals with the topic of digital democracy and discusses its possibilities and limits (Ammann and Schnell 2019; Fichter 2017; Gfeller et al. 2019; Graf and Stern 2018; Kersting 2019; Vayenas 2017).

How is our study different from what is already out there? A comparable project to ours is the *United Nations E-Government Survey*, which is published every two years. Part of its country ranking is also an index on the topic of e-participation, with the components e-information, e-consultation, and e-decision-making (UNDESA 2020). However, its sub-index only represents Switzerland nationally. It also cannot be assumed that internationally oriented rankings will specifically address the situation in the Swiss cantons in the future.

For its part, the *eGovernment Monitor* is, as the name suggests, focused on eGovernment services and is based on survey data at the national level for Germany, Switzerland and Austria (eGovernment Monitor 2020). In terms of content, the focus here is on the population's satisfaction with and demand for e-government services.

The *Civic Tech Barometer*, published by a consortium of universities, has been in existence since 2019 and aims to map the civic tech landscape in Switzerland (Hausser et al. 2020). The procedure consists of conducting an online survey among public authorities. The result is therefore dependent on who participates in the survey. The result of the survey consists of a cartography of the Civic Tech landscape of Switzerland and not a measurement that would allow the systematic comparison of cantons or cities in Switzerland.

The *Digital Participation Switzerland Index*, on the other hand, depicts the range of digital participation opportunities in Switzerland in greater detail, including at the cantonal level. In addition, it differs from the *United Nations E-Government Index* in that it weights the e-Information component less heavily. This component of the index distorts the weight of the actual *participation* component and makes countries look much better than they are in terms of *digital participation*. Although the provision of information on websites or open data portals can be seen as positive and contributes to increased transparency of government action, it is not part of digital participation in the narrower sense.



## CHAPTER

# 02

## Digital political participation

19

What is meant by digital political participation in the narrower sense? The UN has defined e-participation -- a synonym for digital political participation -- as a process that involves citizens in the design, decision-making and implementation of policies using information and communication technologies, with the aim of making this process participatory, inclusive and deliberative (UNDESA 2020).

However, an index that aims to measure this is always also a subjective construct of those who have formed it. We are aware of this. Nevertheless, the aim should be to carry out a measurement that is as valid and reliable as possible. In other words, the index should represent an abstract concept -- digital political participation -- as comprehensively as possible in terms of content (validity) and measure it comprehensibly and accurately (reliability).

In a first step, it is therefore necessary to define more concretely what is meant by digital political participation. The index is about digital offerings, so we are primarily looking at websites and smartphone applications that are used in Swiss cantons. In order to qualify as a digital offering that is to be represented in the index, the corresponding application should be linked to the political decision-making process in terms of its intention or be geared towards it. In terms of content, it aims to be able to directly or indirectly influence an election, a vote, a parliamentary legislative process or a political measure of the executive (government and administration). All channels of a democratic decision-making process in which people living in a canton can participate should be covered by this definition.

Picture by Ashwin Vaswani via Unsplash

2021

Participation should be broadly defined in terms of content and not merely include actions that have directly led to a generally binding political decision. Introducing an issue or a problem into the political discussion and discussing political topics are also processes that can lead to a political decision and must therefore also be reflected in the index.

What should be explicitly avoided is the inclusion of purely informational offerings on administration and government websites. Or if they are included, they should not be reflected in a high score. Previous indices, such as the one for eParticipation of the UN, suffer from the fact that the information component is given too much weight, which leads to countries having a high score in the index, although digital political participation in the narrower sense is almost completely absent. For example, in the 2020 version of the UN E-Participation Index, Japan is currently in fourth place (UN 2020: 120), although there is hardly any digital opportunity to participate in the political process in the country. This has to do with how the index is composed and how it is measured. In this case, the measurement is no longer necessarily valid (the result obviously makes no sense), but it may well have been carried out correctly according to its own methodology.

The exclusion of purely informational offers is easy to say, but one quickly finds oneself in a grey area. The decisive criterion for making a distinction here is the question of whether the information is prepared in such a way that a link to a pending political decision-making process is evident or not. In concrete terms, this means that a digital archive of parliamentary debates in the cantonal council will not be included in the index with a high score, but the possibility of viewing information about candidates before a parliamentary election on an online election aid from *smartvote* or *Vimentis* will, because an analytical and practical added value has arisen for

the users. Existing politically relevant information has been processed "smartly" with the help of a civic tech tool and therefore receives a higher score in our index, for example.

Furthermore, care is taken to ensure that the broadest possible inclusion of all segments of the population has a positive impact. E-participation is therefore not exclusively linked to Swiss citizenship. In addition, digital political participation offerings do not only come from government agencies (top-down), but can also be offered by civil society organisations (bottom-up). On the one hand, this diversity is desirable and prevents one tool from taking over the power to determine the political discourse. On the other hand, diversity can also be confusing because it is no longer clear where the best access is. This must be clarified separately for each tool and cannot be assessed in general.

The concept of digital political participation thus includes opportunities to make one's voice heard during the various phases of the policy cycle (problem definition, agenda setting, formulation and decision-making, implementation, evaluation) with the help of information and communication technologies and to influence legally binding decisions or their preparation by state institutions. The corresponding digital tools and applications can, but do not necessarily have to be provided by the state. Digital political participation encompasses the exchange facilitated by the internet between the population, civil society organisations and government agencies in the various phases of the political process.

## CHAPTER

## 03

## Index formation



The *Index of Digital Political Participation Switzerland* consists of three dimensions (D1-D3), comprises a total of seven tools (T1-T7) and four weighting factors each (G1-G4). The weighting factors are only applied where they make sense. The index is constructed in such a way that its value range is between 0 and 100. The three dimensions are equally weighted in the calculation of the index.

Dimensions	Tools	Value	Bonus/Malus (each +/- 0.2)			
			Use	User community	User friendliness	Diversity
D1 Opinion formation	T1 e-Deliberation (discussing)	1-5	✓	✓	✓	✓
	T2 Digital political education (learning)	1-5		✓	✓	✓
	T3 e-Transparency (monitoring)	1-5		✓	✓	✓
D2 Co-participation	T4 e-Consultation (consulting)	1-5	✓		✓	
	T5 e-Issues/concerns (expressing views)	1-5	✓	✓	✓	✓
D3 Decisionmaking	T6 e-ID (identification)	1-5	✓	✓	✓	✓
	T7 e-Voting (elections and referendums)	1-5	✓	✓		

Figure 1: Dimensional analysis of digital political participation and measurement tool with seven indicators and bonus and malus points.

Capturing the content of digital political participation with the help of the three dimensions of opinion-forming (D1) as the basis of an individual decision-making process, participation (D2) as an exchange between individuals and state authorities, and decision-making (D3) as the conclusion of a political process is nothing new in the field

Picture by Possessed Photography via Unsplash

of digital democracy. Differences are found in nuances and because technology has advanced. Both the first well-founded academic works in Europe (Kies et al. 2003) that dealt with the topic and more recent overview works (Hennen et al. 2020) are conceptually based on these three dimensions. We assume that these three dimensions can be measured using several indicators on a scale of 1 to 5. Each indicator tries as concretely as possible to translate an underlying question into a numerical value.

### DIMENSION 1

#### OPINION FORMATION

In this dimension, we record that political decisions in democracies are preceded by a phase of opinion formation. To capture this dimension, we focus on the digital tools e-Deliberation (T1), digital political education (T2) and e-Transparency (T3).

Regarding e-deliberation (T1), we ask ourselves where and how a political discussion can be held in a canton on the internet about voting issues, elections, political measures and politics in general. It is fundamental for opinion formation that a discursive exchange is possible. The more structured, targeted and smart the applications that can be used for this, the higher the score should be. We give one point for cantonal political discussions and debates in commercial social media such as Facebook, Twitter, but also in the discussion forums of private online media. Two points are achievable if the political discussion is channelled somewhat more strongly, for example by cantonal authorities operating their own channels in the social media. Three points are awarded for broad-based, moderated platforms that serve political exchange (such as the existing online forum *politnetz.ch*, Garcia et al. 2015). Four points are awarded to platforms for political deliberation and discussion that can lead to a political output, similar to the trials with *demoscan* in the canton of Geneva, for example (<http://demoscan.ch>). We award five points if one or more active state-supported platforms are moderated and, if necessary, have smart software that is solution-oriented and helps to avoid

polarisation (in the sense of <http://pol.is>). A bonus or malus for high or low use, a malus for the exclusion of population groups, a bonus for an intelligent combination with other civic tech tools and a bonus for diversity are possible.

Another important aspect of opinion formation concerns political education in the digital space (T2). It should be possible to learn about cantonal politics with the help of the internet and applications. In the digital sphere, as in political education in general, it is not just about information, but also about acquiring the corresponding competences. We ask ourselves where and how civic education is offered and can take place on the internet in a canton. The more interactive, smart and competence-oriented the offers in a canton, the more points it should receive. For the classic information offered on cantonal websites, for example with explanations of the political system or instructions for elections and votes, we give 1 point. As soon as applications such as *voteinfo* or *votey.ch* on individual voting proposals or *easyvote* materials are used in schools, 2 points are awarded. If a canton has also used online voting aids from *vimentis* or *smartvote* or *votenow* for the most recent election (i.e. even before 2021), 3 points are awarded. As soon as there is a civic education offer with tools aimed at extended competence acquisition, such as political games and simulations, 4 points are credited. What exactly the gold standard looks like, for which 5 points can be awarded, we leave open. It would have to be an integrated digital platform focused on skills acquisition, which has yet to be invented. There can be a bonus for an expanded user group if, for example, videos on cantonal voting proposals are available or multilingual offers are available that can lead to more participation. The bonus for user-friendliness can be obtained if combinations with other tools are possible. Likewise, a bonus can be awarded if the offer for cantonal political education on the internet is diverse and does not only come from one provider.

In addition, for the dimension of opinion-forming, we use the indicator *e-transparency* (T3) to assess how easily and how well a canton offers information related to the political process and has it available on the internet. The question here is what information can be accessed digitally and where, in order to be able to follow the political process as widely as possible. The data provided should not only make it possible to inform oneself, but also to carry out

smart monitoring of state activities. Efforts in this direction are commonly known as “open government” or “open data”. If a canton has not yet done anything in this area and has not created a legal basis, we give the lowest score, i.e. 1. As soon as the legal basis is in place, a canton scores 2 points. Three points are possible if a canton provides the most important state institutions and their output, such as council minutes, in unprocessed form, for example as PDF files. As soon as a canton processes this data additionally, for example graphically, and thus generates added value, we award 4 points. Five points are possible if a smart civic tech application such as *smartmonitor* or *politik.ch* is used to additionally process the monitoring of state affairs by means of a data analysis or if it is presented particularly well. We give a bonus for user-friendliness if we find a portal that bundles data in one overview, so that one does not have to search for the information in several places because it is fragmented. Likewise, this bonus can be awarded if civic tech tools are used. A bonus is also possible for the diversity of providers.

## DIMENSION 2 PARTICIPATION

The second dimension of the digital political participation index maps the institutionalised exchange between government agencies and civil society. For this purpose, the two components *e-consultation* (T4) and *e-issues* (T5) are recorded. The emphasis is on the common endeavour to collect the collective wisdom of the population in the exchange, collection of opinions and depositing of concerns, as with sensors. In English-language literature, the terms “crowdsourcing” or “wisdom of the crowd” have emerged, especially in the area of smart cities. The two instruments differ in terms of where the initiative for the exchange between state and society comes from. In an *e-consultation*, the starting point is a government agency. In the case of an e-request, the trigger for the exchange process comes from society.

For the digital tool *e-consultation* (T4), we therefore ask ourselves where and how on the internet the authorities, i.e. largely parliaments and governments, seek the input of society? Then it also depends on how far-reaching and politically binding consequences such a consultation subsequently has for the political decision-making process. At the lowest level, 1 point is awarded if submissions are also accepted by e-mail in cantonal consultations. As soon as a canton makes an effort with digital surveys to find out the opinion of the population on a topical issue or subject matter, 2 points are awarded. If hearings are routinely conducted digitally and are equipped with their own interface, as in the Canton of Aargau, for example, we award 3 points. Digital consultation platforms created specifically for this purpose, such as in the federal state of Baden-Württemberg or in Taiwan (Huang et al. 2021), which are often also coupled with discussion platforms, are awarded 4 points. If there is a mechanism that makes it possible to bundle input in the sense of liquid democracy and brings with it a certain political commitment, we arrive at the maximum of 5 points. For use, a bonus can be achieved if *e-hearing* is used frequently and by default, but also as a malus if a digital solution for hearings exists, but it is rarely or no longer used. If, as in the Canton of Geneva, this is a pilot project or a completely new project, we will waive the malus. Since the user-friendliness can increase in combination with other tools – on a political participation platform, for example – we give a bonus for this.

In the case of the digital tool *e-concerns* (T5), the dimension of participation is about what infrastructure is available to enable initiatives from society into politics or to the authorities. We also ask ourselves where and how on the internet parliaments or governments allow input for political concerns or measures and how far-reaching the consequences of these tools are. At the lowest level with 1 point, there is no digital infrastructure for mass petitions from the population, except that these can be sent by email instead of on paper. If digital support for a concern from the population, as with *petitio.ch* or *change.org*, comes from outside the state structure via private carriers, this is awarded 2 points. Three points are awarded as soon as there is an official platform for online petitions that can also come up with a response to the initiators within a certain period of time. If the platform, such as the online petition of the German Bundestag, makes it possible to enter the request of a state institution and possibly even enables the petitioners to appear before a parliamentary committee, we credit 4 points (Jungherr and Jürgens 2012). The maximum of 5 points is reached when an online platform with electronic identification has the same weight as the submission of a parliamentary proposal with a sufficiently high number of online supporters - such as in Finland (Serdült et al. 2016). If these digital input options have not been used for longer than a year, a malus is deducted from the score for the tool; for frequent use, we credit a bonus. If the platform is not politically neutral or non-partisan, we apply a malus to the user group. In terms of user-friendliness, a bonus is possible if there is a link to another tool or at most a moderated discussion forum. For the existence of several providers, we award the bonus for diversity.

## DIMENSION 3

### DECISION

For the third dimension of the index, it is important to map elements of political decision-making, provided they can be used digitally. In addition to public debate and an exchange between the state and society, digital tools can be used that make it possible to support the act of voting and electing even under difficult conditions such as the current pandemic. To this end, the foundations must first be laid in the form of electronic identification, i.e. an e-ID (T6), so that it can then be used, among other things, for e-voting (T7), i.e. digital voting and election.

For the indicator of electronic identification (T6), we would like to determine how and for which public services an online identity can be used. Higher values are achieved by e-ID solutions if – once created – it can be applied directly and repeatedly for a government service, especially in the area of digital participation. If there is no login or account to be able to use digital public administration services, we award the lowest possible score on our scale, i.e. 1. As soon as it is possible to log in to cantonal websites with online services using an email address or a social media account, 2 points are awarded. Two points are also awarded for the possibility of identifying oneself via signature on a touch screen. Depending on the service, this signature on the screen may have to be printed out. This was the case, for example, in the Netherlands during the collection of signatures for the referendum on the association agreement with Ukraine in April 2016 (Bisaz and Serdült 2017). If one can register with the help of an ID scan, i.e. the identification of an electronic ID card via video or other interface, 3 points are reached. As soon as a verified e-ID can be solved with the help of one-time personal registration or registered mail and used on cantonal websites to log in, 4 points are awarded for this indicator. The maximum of 5 points is possible as soon as a media-independent e-ID with a qualified electronic signature is available and can also be used for participation-relevant content such as e-collecting. Malus points are possible in the case of low use of the solution offered or if physical registration at an office is necessary. Furthermore, we consider it confusing for users if several systems are used in one canton. Here, too, there is the malus. A positive weighting for the solution offered is applied if a special digital identification solution exists for otherwise inadmissible groups such as refugees and Sans-Papiers (e.g. the Zurich Card). We award a further

bonus if the corresponding login solution is particularly easy to access and is highlighted in a user-friendly way on a website (see for example in the Canton of Aargau).

For the last indicator measured, e-voting (T7), it is ascertained whether and what efforts are or were made in a canton with regard to the use of the digital voting channel. Due to the special situation in Switzerland with the reorientation of e-voting – and the effect that currently no e-voting system is operational – the near past is also assessed to a certain extent (Mendez and Serdült 2014; Serdült et al. 2015). It also plays a role for which population groups e-voting is or was possible. Some cantons were only able to offer e-voting in selected municipalities. Or they decided to open the new voting channel only to Swiss abroad. If a canton has the legal basis for e-voting or has made corresponding attempts, 2 points are awarded. If not, only 1 point is awarded. All cantons that have offered the digital voting channel once in the pilot phases of e-voting in Switzerland can score 3 points. As soon as e-voting solutions are offered that allow individual verification (Serdült et al. 2017), 4 points are possible. Individual verification allows users to check whether their own vote has arrived in the electronic ballot box and is counted as it was cast. In simple terms, this is achieved by means of cryptographic procedures and the encrypted transmission of individual verification codes. As soon as a canton can offer an e-voting system that also allows universal verification, 5 points are awarded. In systems with universal verification, users, but also the public in general, can check all digitally cast votes, or their verification codes, for their mathematically correct processing in the electronic ballot box. This verification can also be carried out via additional external instruments.

We only award bonus or malus points for this indicator for the use and the user group to which e-voting is available. Regarding use, a bonus is only credited if e-voting is generalised, i.e. accessible to all, and the user rate is above two thirds. If the usage rate is below one third of all eligible voters, a malus will be deducted. With regard to the user group, efforts to make e-voting available to the Swiss abroad are rewarded, as are special solutions for people with disabilities, such as the blind. On the other hand, there is a penalty if, as was often the case in Switzerland during the pilot phase, e-voting could only be made available to a selected number of communes. We are aware that the latter limitation is due to the overriding framework conditions of the federal government's trial arrangement. Nevertheless, it is the case that the circle of users was *de facto* restricted and we also want to record this in the index with a small deduction.



## CHAPTER

# 04

## Data and method

The data collection and coding for all seven tools, including bonus and malus points, took place between July and September 2021. In a first round, the cantons were each collected independently by two team members using an online coding platform and then compared in a second round. All codings involved two or more analysts in the subsequent consolidation phase. In order to arrive at an evaluation for the seven tools that is as consistent as possible, corresponding flowcharts were created to help (see appendix). For better comprehensibility of the codings, the evaluations for each canton and all tools are supported by a brief justification. These are also listed in the appendix.

The procedure for standardisation and the aggregation of the distributed points into an index is based on that of the well-established Human Development Index<sup>1</sup>. The calculation of the Digital Political Participation Index Switzerland 2021 is carried out in five steps:

1. rating of all seven tools on a 5-point scale.
2. weighting of the determined value with bonus or malus points for use, user circle, user-friendliness and diversity with values of maximum plus or minus 0.2 points each. The value for a bonus or malus weighting with the value of 0.2 is ultimately arbitrary, but designed in such a way that the next higher or lower overall value cannot be achieved by bonus or malus points alone.
3. standardisation of all raw values per tool into a value range from 0 to 1, respectively 0 to 100.
4. aggregation at the level of the dimensions: Calculation of the arithmetic mean for each of the three dimensions (compensates for weaknesses within the dimension).

<sup>1</sup> See: <http://hdr.undp.org/en/content/human-development-index-hdi>

- aggregation across dimensions: calculation of the geometric mean for the three dimensions of the index (penalises weaknesses between dimensions).

The example of the Canton of Aargau will be used to show how the index is calculated in concrete terms (see Fig. 2).

	Value	Use	Community	User-friendliness	Diversity	Raw score	Standardised	Median
T1 e-Deliberation	2	0	0	0	0	2	25	43.3
T2 Digital political education	3	-	0.2	0	0	3.2	55	
T3 e-Transparency	3	-	-	0	0	3	50	
T4 e-Consultation	3	0.2	-	0.2	-	3.4	60	47.5
T5 e-Issues/Concerns	2	0.2	0	0	0.2	2.4	35	
T6 e-ID	2	0	0	0.2	0	2.2	30	40
T7 e-Voting	3	-0.2	0.2	-	-	3	50	
Index						43.5		

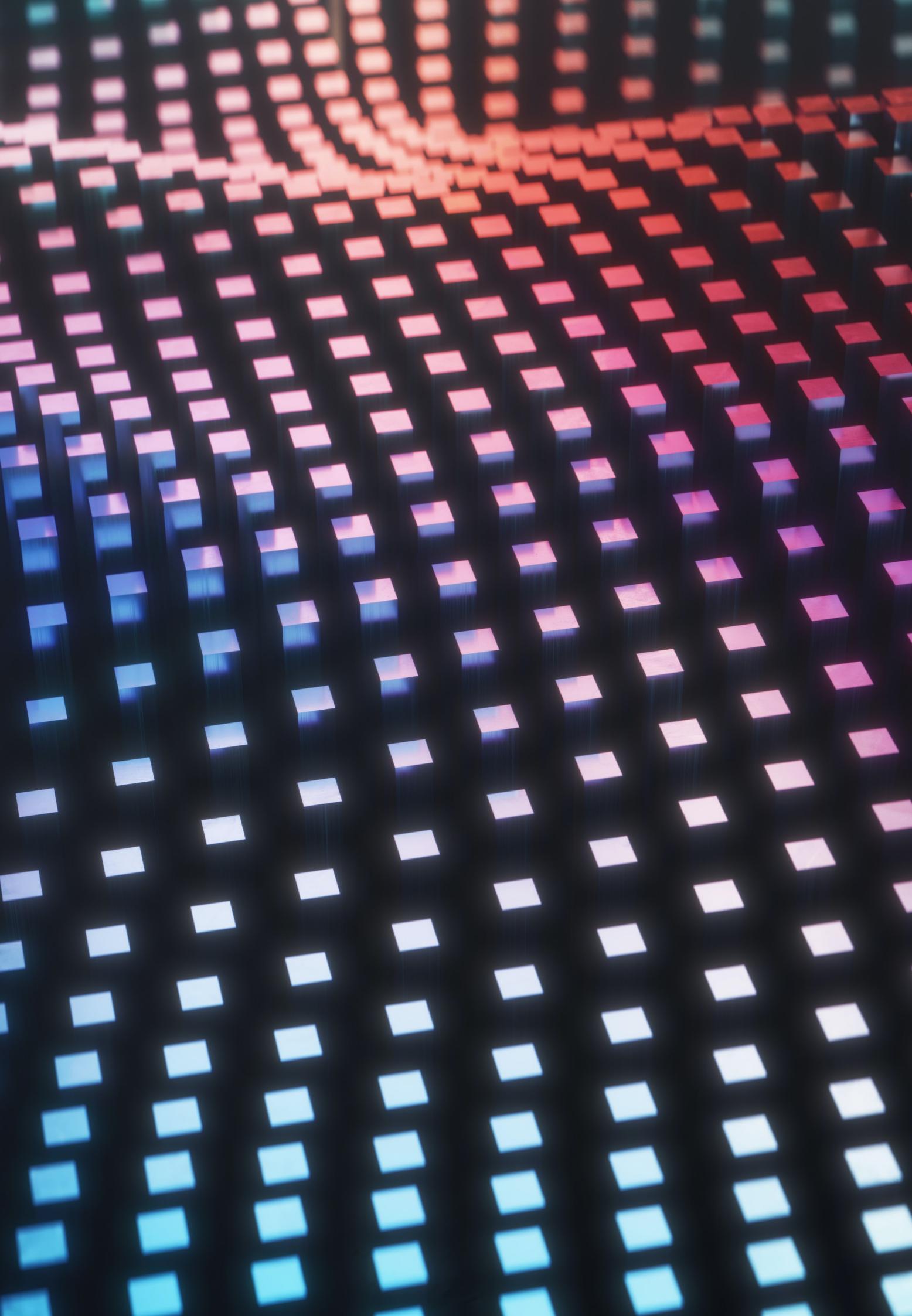
Figure 2: Example calculation of the Swiss Digital Political Participation Index 2021 for the canton of Aargau.

The raw score for each tool corresponds to the sum of the value assigned on the five-point scale as well as the weights for use, user group, user-friendliness and diversity, if applicable. For example, the Canton of Aargau receives a value of 3 for the e-consultation tool (T4) because it has its own portal for electronic consultations and hearings and also uses it regularly. Together with a bonus each for diligent use and high user-friendliness, the raw score is then 3.4 points. The raw score is then normalised to a standardised value range between 0 and 100 with the help of a normalisation procedure (Unity-Based Normalisation). Since all tools are currently measured on a scale of 1 to 5, this transformation would not be necessary at this point. However, we apply this standardisation in order to come back to a value between 0 and 100 even if the measurement instrument is changed at a future date. It may be that in the future, due to technical developments, it will be necessary to measure one of the tools on a scale of six.

The effect of standardisation can be easily checked by considering that the value 3 on a five-point scale is exactly in the middle. The standardised value between 0 and 100 is exactly 50 for a raw value of 3, so it is also in the middle. In our case of 3.4 for e-consultation in the Canton of Aargau as a raw score, the standardised score is then 60 points.

Within a dimension, the arithmetic mean is calculated next. For the Canton of Aargau with the standardised values for the three tools of the dimension opinion formation e-Deliberation (25 points), digital political education (55 points) as well as e-Transparency (50 points), the rounded mean is 43 points.

Based on the standardised mean values for all three measured dimensions of digital political participation of 43 points for opinion formation (D1), 48 points for participation (D2) and 40 points for decision-making (D3), the final value for the index is calculated using the geometric mean. The geometric mean consists of the third root of a multiplication of the values for the three dimensions. This results in an index value for the Canton of Aargau of rounded 44 points. The calculation of the index across the dimensions by means of the geometric mean corresponds to the requirement we set that a Canton only achieves high index values if it performs well in all three dimensions and that it should not be so easy to compensate for the others with one dimension. A low value in one dimension cannot be compensated linearly by the other two dimensions in the case of a geometric mean. This would be easier with an arithmetic mean as the calculation method.



CHAPTER  
**05**  
**Results**

37

The measurement of digital political participation for the Swiss cantons with the help of the index allows a ranking of all cantons (see Fig. 3). At first glance, it is evident that the range is wide and that no canton yet reaches a high value range. The lowest value on the index is 6 points, the maximum 55 points. The mean value is 31 points.

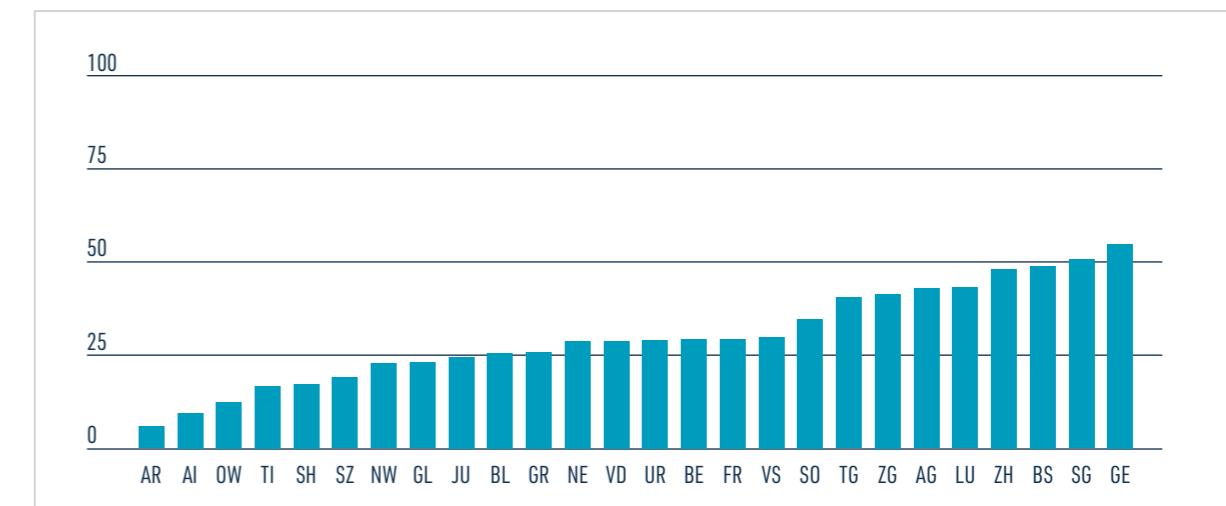


Figure 3: Index Digital Political Participation Switzerland 2021: Values for all Swiss cantons on a scale of 0-100

Although the index values allow a precise ranking, smaller differences between the cantons should not be over-interpreted. If we divide the value range of the Index into five rough, manageable categories of “very low” (0-20 points), “low” (21-40 points) and “medium” (41-60 points), six out of 26 cantons fall into the lowest category (AR, AI, OW, TI, SH, SZ, see Tab. 1). A full twelve cantons are one level higher, but still at an overall low level of the index. At the top of the ranking, in the middle range of the index, are the cantons of Geneva, St. Gallen, Basel-Stadt, Zurich and then Aargau, Lucerne, Zug as well as Thurgau.

Picture by Nathan Watson via Unsplash

2021

	Rank	Index	D1	D2	D3
Geneva	1	55	58	58	50
St. Gallen	2	51	50	53	50
Basel Stadt	3	50	58	53	40
Zurich	4	49	60	55	35
Aargau	5	44	43	48	40
Luzern	5	44	60	55	25
Zug	7	42	42	35	50
Thurgau	8	41	50	55	25
Solothurn	9	35	50	18	50
Valais	10	30	45	18	35
Fribourg	10	30	43	18	35
Bern	10	30	43	18	35
Uri	10	30	52	13	40
Neuchâtel	14	29	42	13	48
Waadt	14	29	42	13	48
Graubünden	16	26	42	13	35
Basel Landschaft	16	26	52	28	13
Jura	18	25	42	10	38
Glarus	19	24	42	13	25
Nidwalden	20	23	37	13	28
Schwyz	21	19	33	18	13
Schaffhausen	22	18	35	3	63
Ticino	23	17	40	10	13
Obwalden	24	13	33	3	35
Appenzell Innerrhoden	25	10	25	15	3
Appenzell Ausserrhoden	26	6	35	3	3

Table 1: Index Digital Political Participation Switzerland 2021: Rank, index value, value per dimension (Opinion Formation D1, participation D2, decision D3), for all Swiss cantons, scale from 0 to 100

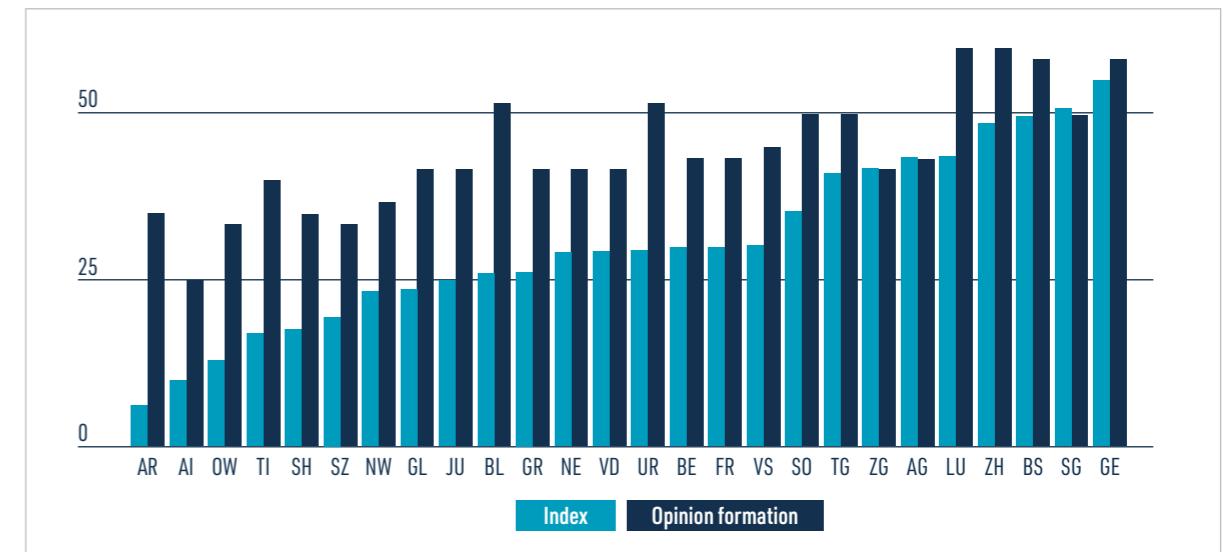


Figure 4: Index values for all cantons in Switzerland on a scale of 0-100 overall compared to the values for the Dimension Opinion Formation

A look at the three dimensional components of the Index Digital Political Participation Switzerland 2021 can show the areas in which the cantons, in comparison, as a whole, but also individually, fluctuate up or down (see Table 1). There are cantons that score relatively poorly overall, but stand out positively in one of the three dimensions.

For example, no canton has very low index values for the dimension of opinion-forming (D1). In all cantons there are also digital opportunities for political exchange (see Fig. 4). In comparison to the values of the overall index - in which they rank in the group with low index values - the cantons of Basel-Landschaft, Uri and Solothurn stand out here with values of 50 points and above. The average value across all cantons for the dimension of opinion formation is 45 points.



Figure 5: Index values for all cantons in Switzerland on a scale of 0-100 overall in comparison with the values for the dimension participation

In the dimension of participation (D2), where we measure the digital possibilities of consultation and input, for example in the form of petitions, the cantons of Thurgau, Lucerne and Zurich are in a better position than the overall index would suggest. They all score over 50 points for the dimension of participation (see Fig. 5). On the other hand, the Canton of Zug, which generally belongs to the top group, falls slightly in this respect compared to the overall performance. The average score across all cantons for the dimension of participation is 25 points.

For the dimension of decision-making (D3), it is primarily relevant which possibilities of digital identification a canton can offer and whether it has already participated in the

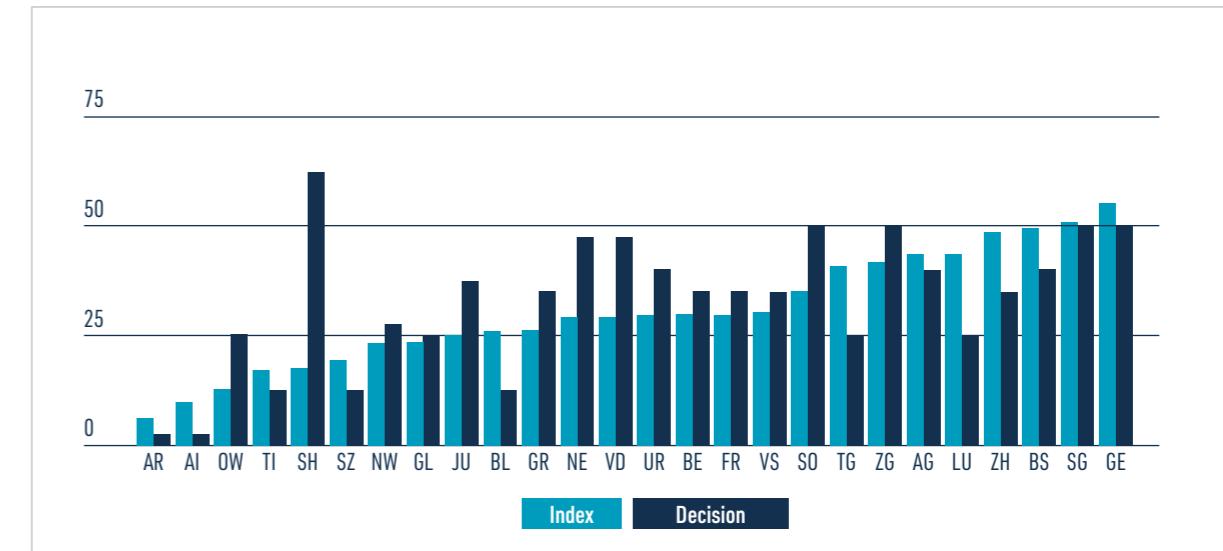


Figure 6: Index values for all cantons in Switzerland on a scale of 0-100 overall compared to the values for the Decision dimension

e-voting pilot tests in Switzerland in the past. In this dimension, the Canton of Schaffhausen in particular stands out positively; compared to its position in the overall ranking, it has the highest score ever in Switzerland for one of the measured dimensions, with 63 points. In the case of Zug because of the e-ID solution and the cantons of Neuchâtel, Vaud and Solothurn in combination with e-voting trials, these cantons also score higher in the decision dimension. The cantons of Basel-Landschaft, Thurgau and Lucerne still have some catching up to do in this dimension relative to the overall ranking. The average score across all cantons for the decision dimension is 34 points.

## CHAPTER

## 06

## Discussion

This report is primarily concerned with the conceptual derivation of the Swiss Digital Participation Index, the creation of a measuring instrument for it and the presentation and illustration of the measured values. In future, the index values will be published annually. In the meantime, further scientific studies will be carried out within the framework of the project, which are aimed

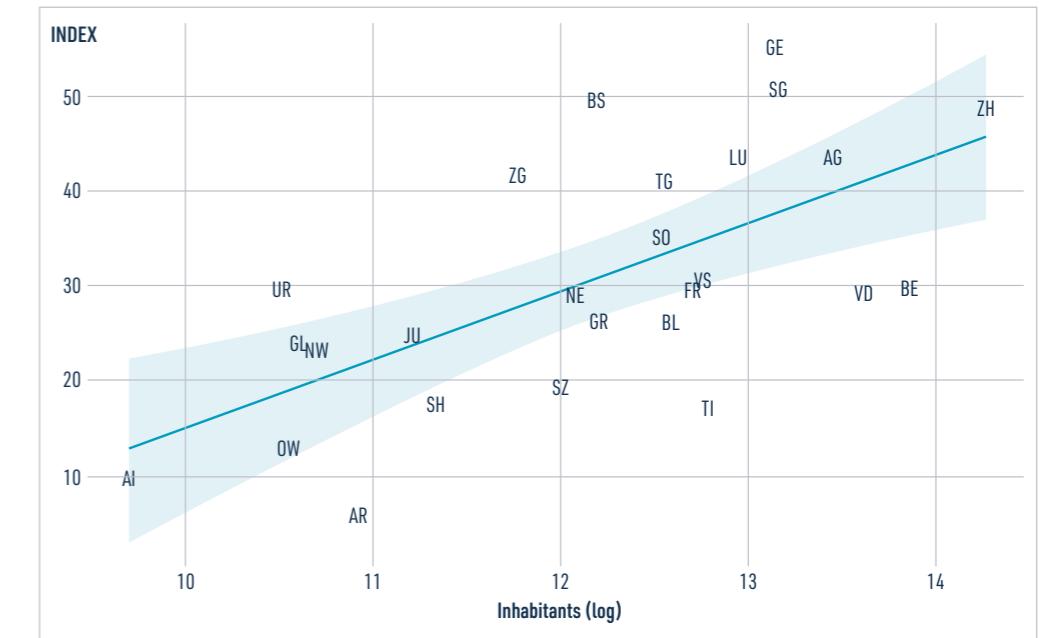


Figure 7: Index Digital Political Participation Switzerland per canton (0-100) and permanent resident population. 2020, log (Federal Statistical Office, 1 September 2021). Positions of the cantonal abbreviations are optimised to avoid overlaps, i.e. not entirely precise.

at consolidating the measuring instrument and possibly also expanding it internationally. It could also be worthwhile to record and evaluate digital participation opportunities in Switzerland at the level of municipalities and cities.

Although further scientific studies with the data material now available are still pending, it is already of interest to see whether any explanatory factors can be found at the macro level for the surprisingly high variance among the cantons regarding digital political participation. If we plot the index values for the Swiss cantons on one axis of a scatter diagram and the population size (logarithmised) on the other, the regression line (green) shows that there is a relatively clear positive correlation between the two variables (see Fig. 7). The larger the population in a canton, the better the opportunities for digital political participation seem to be. Whether there is actually a causal relationship here should be left open. Even if this seems plausible. With a large

population, digital opportunities for participation are more likely to pay off, because they help to connect and exchange with more users thanks to inherent economies of scale with the same resources. Cantons that lie further away from the regression line (as the best estimate of minimised deviations from the mean) deviate from this pattern. On the one hand, there are cantons such as Geneva, St. Gallen, Basel-Stadt and Zug that have higher index values for digital political participation than their population size would suggest compared to the rest of the Swiss cantons. On the other hand, there are cantons such as Appenzell Ausserrhoden, Vaud, Bern and Ticino for which one would expect higher index values based on population size. So, there must be other factors at play.

Another reason for the differences found between the cantons can be the economic performance. Tools for digital political participation are associated with investment costs and require personnel to operate. In order to investigate the economic factor, Figure 8 also shows the gross domestic product as an indicator of the economic strength of a canton in relation to the index for digital political participation. Here, too, there is a linear relationship with some cantonal deviations, even if population size and economic power certainly overlap. The greater the economic power, the more digital participation opportunities there are in a canton. Here, too, the cantons of Appenzell Ausserrhoden, Ticino and Bern should actually have a higher index value in comparison with the other cantons due to their economic strength. The fact that this is not the case may be due to political preferences, for example, which still need to be explored further.

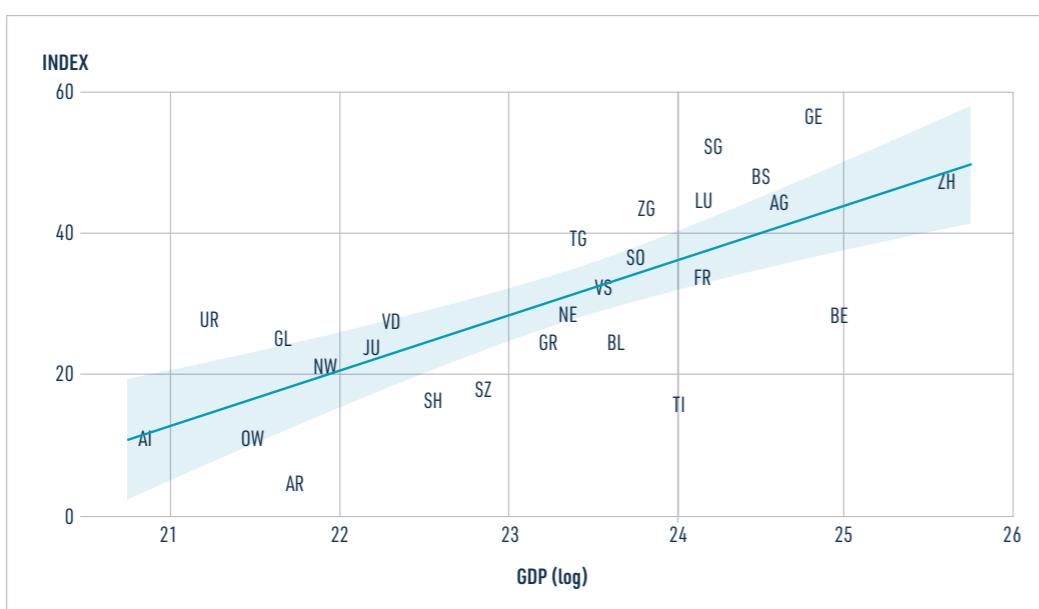
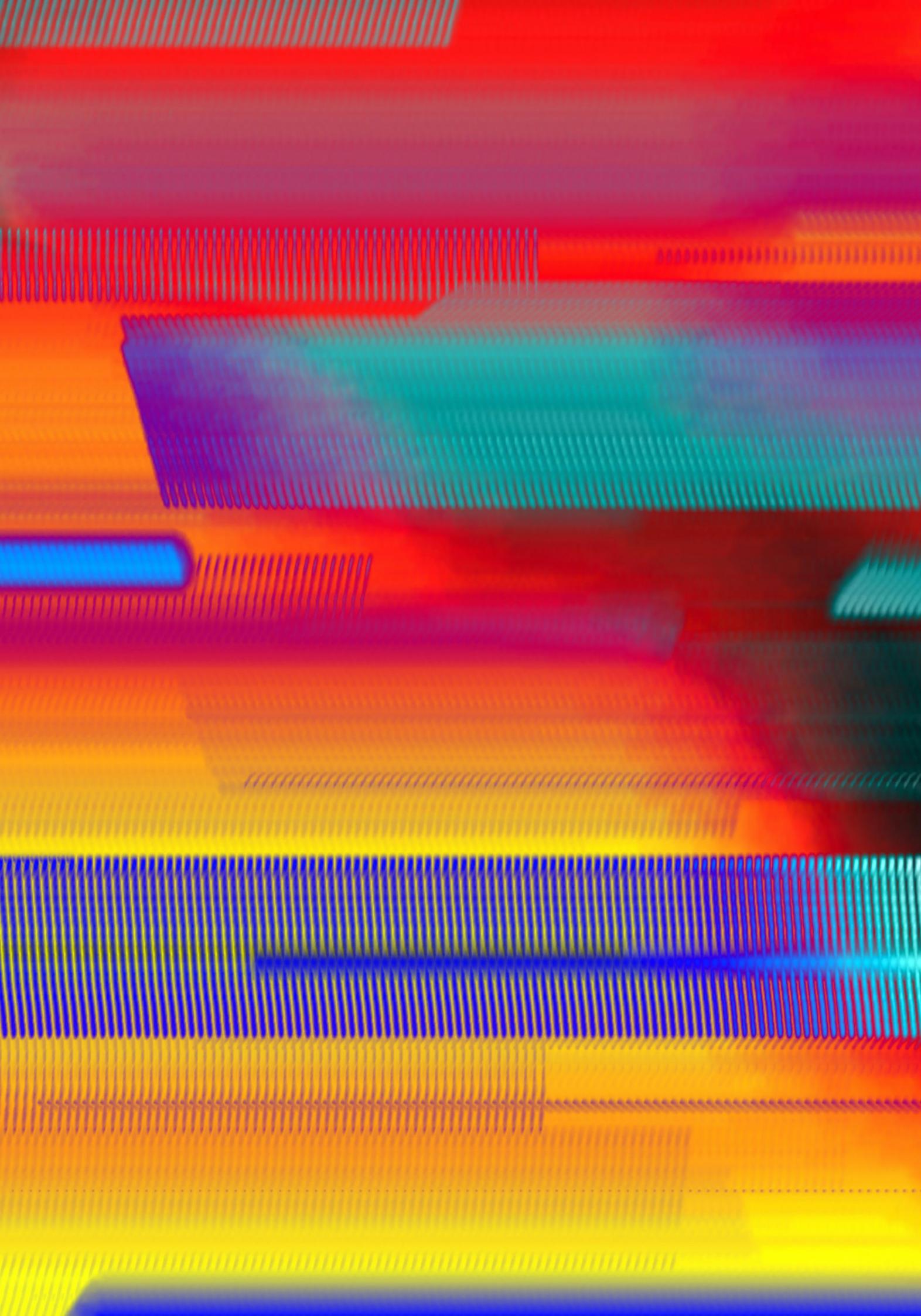


Figure 8: Index Digital Political Participation Switzerland per Canton (0-100) and Gross Domestic Product 2017, in CHF million log (Federal Statistical Office, 21 January 2021). The positions of the cantonal abbreviations are optimised to avoid overlapping, i.e. they are not completely precise.



## Literature

- Ammann, Matthias and Schnell, Fabian (2019) *Digitale Direkte Demokratie*. Zurich, Avenir Suisse.
- Bisaz, Corsin and Uwe Serdült (2017) E-Collecting as a Challenge for Direct Democracy in Switzerland, LeGes 2017/3, 531-545.
- eGovernment MONITOR 2020. Published by Initiative D21 and Technische Universität München. <https://initiatived21.de/app/uploads/2020/10/>
- egovernment\_monitor\_2020\_onlineausgabe.pdf (accessed 3 October 2021).
- egovernment Switzerland (2020) Monitoring Report 2020. Bern, eGovernment Switzerland-Suisse-Svizzera.
- Fichter, Adrienne (2017) *Smartphone Democracy*. Zurich, NZZ Libro.
- Garcia, David; Abisheva, Adiya; Schweighofer, Simon; Serdült, Uwe; Schweitzer, Frank (2015) Ideological and Temporal Components of Network Polarization in Online Political Participatory Media, *Policy & Internet* 7 (1), 46-79.
- Germann, Micha; Mendez, Fernando; Wheatley, Jonathan and Serdült, Uwe (2015) Spatial Maps in Voting Advice Applications: The Case for Dynamic Scale Validation, *Acta Politica* 50 (2), 214-228.

- Germann, Micha and Serdült, Uwe (2014) Internet Voting for Expatriates: The Swiss Case, JeDEM - eJournal of eDemocracy & Open Government, 6 (2), 197-215.
- Gfeller, Katja; Braun Binder, Nadja; Serdült, Uwe (2019) Democracy in the Digital Age: The Example of Initiative and Referendum in Switzerland, in: Kübler, Daniel; Glaser, Andreas and Waldis, Monika (eds.) Brennpunkt Demokratie: 10 Jahre Zentrum für Demokratie Aarau. Baden, hier+jetzt, 48-65.
- Graf, Daniel and Stern, Maximilian (2018) *Agenda for a Digital Democracy*. Zurich, NZZ Libro.
- Hausser, Armelle; Lucas, Jean-Francois; Drevon, Guillaume and Kaufmann, Vincent (2020) *Baromètre des civic tech en Suisse: Edition 2019*. Genève, EPFL - Laboratoire de Sociologie Urbaine. Link: <https://www.epfl.ch/labs/lasur/fr/das-barometer-der-civic-tech-2021/> (last visited 5 October 2021).
- Hennen, Leonhard et al. (Eds.) (2020) *European E-Democracy in Practice*. Cham, Springer.
- Huang, Hsin-Ying; Kovacs, Mate; Kryssanov, Victor; Serdült, Uwe (2021). Towards a Model of Online Petition Signing Dynamics on the Join Platform in Taiwan, ICEDEG2021 - 8th International Conference on eDemocracy & eGovernment, Quito, Ecuador, 28-30 July 2021, pp. 199-204.
- Jungherr, Andreas and Jürgens, Pascal (2010) The Political Click: Political Participation through E-Petitions in Germany, Policy & Internet, 2 (4), pp. 131-165.
- Kersting, Norbert (2019) Online Participation. Evaluation and Development- Status Quo and Future. in: Hofmann, Jeanette et al. (eds) 2019: Politics in the digital society: key problem areas and research perspectives. Bielefeld: Transcript: 105-122.
- Kies, Raphael; Mendez, Fernando; Schmitter, Philippe C. and Trechsel, Alexander H. (2003) *Evaluation of the Use of New Technologies in Order to Facilitate Democracy in Europe*. STOA 166 EN 10-2003, Luxembourg, European Parliament.
- Mendez, Fernando and Serdült, Uwe (2014) From initial idea to piecemeal implementation: Switzerland's first decade of Internet voting reviewed, in: Zissis, Dimitrios and Lekkas, Dimitrios (Eds.) Design, Development, and Use of Secure Electronic Voting Systems. Hershey PA: IGI Global, 115-127.
- OECD (2020) Innovative Citizen Participation and New Democratic Institutions: Catching the Deliberative Wave: Highlights 2020. Paris, OECD.
- Swiss Confederation/Federal Chancellery (2011) E-Democracy and E-Participation: Report to the Federal Council. Cited as BR 2011.
- Serdült, Uwe; Fernando Mendez; Maja Harris and Hyeon Su Seo (2016) Scaling Up Democracy with E-Collection?, in: Edelmann, Noella and Peter Parycek (eds.) CeDem 2016 Conference for E-Democracy and Open Government 2015, 18-20 May 2016, Danube University Krems, Austria, 25-31.
- Serdült, Uwe; Dubuis, Eric; Glaser, Andreas (2017) Electronic versus postal voting channel in comparison, Jusletter IT, 21 September 2017.
- United Nations, Department of Economic and Social Affairs (2020) *United Nations E-Government Survey 2020: Digital Governance in the Decade of Action for Sustainable Development*. New York, United Nations. Cited as: UNDESA 2020.
- Vayenas, Costa (2017) Democracy in the Digital Age. Arena Books.



## Appendix

### TEAM



**Uwe Serdült** (project leader) is a research associate at the Centre for Democracy Aarau (ZDA) at the University of Zurich and a professor at the e-Society Lab at Ritsumeikan University in Japan. From 2012-2018, he led the e-Democracy project based at the ZDA and, together with Prof. F. Schweitzer, ETHZ, an interdisciplinary SNSF project on emotionality and polarisation in new social media (2013-2016).



**Costa Vayenas** (project leader) is the author of the book Democracy in the Digital Age and heads the Procivis Think Tank that studies the impact of digital technologies on democracy. In addition to a wide range of lecturing activities at home and abroad (including the European Parliament in the area of e-government), he is currently also teaching at ETH Zurich as a lecturer in the new postgraduate programme Technology and Public Policy Programme.



**Herveline Du Clary** is a research assistant at the Centre for Democracy Aarau (ZDA) at the University of Zurich. She holds a Bachelor's degree in French and English Language and Literature and a Master's degree in Communication and Journalism. She is interested in the role of digital media in the rise of European populism, while she has honed her knowledge of national politics through her work as an editor for SRF info.



**Gabriel Hofmann** is a research assistant at the Centre for Democracy Aarau (ZDA) at the University of Zurich. He studies political science with a focus on Swiss politics at the Institute of Political Science Zurich, where he is also a research assistant at the Chair of Policy Analysis & Evaluation. During his studies, he has intensively studied civic competencies and decision-making processes.

## DOCUMENTATION CODING

The values for each tool range from a minimum of 1 to a maximum of 5. At each level, bonuses and penalties can also be assigned per tool for effective use, user group, user-friendliness and diversity of the offer, if this makes sense. The comprehensibility of the codes by the research team is facilitated by consulting the flow charts in the appendix below.

Opinion formation		Participation				Decision
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
The canton has various channels on social media that are regularly used. However, there is little interaction with users. Therefore, the score is 2. AG (20.08.21)	In the canton, voters can use <i>VoteInfo</i> and <i>smartvote</i> . In addition, it publishes explanatory videos on YouTube on the cantonal proposals. Therefore, the score is 3. bonus for information videos of 0.2, i.e. 3.2.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3. Therefore the score is 3.	The canton has its own tool for participating in consultations and hearings via the e-government portal. It is the regular procedure and is used regularly. Therefore, the score is 3. Bonus for use and user-friendliness of 0.2 each, i.e. 3.4. <sup>1</sup>	The canton has its own tool for participating in consultations and hearings via the e-government portal. It is the regular procedure and is used regularly. Therefore, the score is 3. Bonus for use and user-friendliness of 0.2 each, i.e. 3.4. <sup>1</sup>	The canton has an e-government portal where you can log in without verifying your identity. The login is very intuitive via a central button. Therefore, the score is 2. bonus for user-friendliness of 0.2, i.e. 2.2.	There is currently no e-voting available in the canton. In the past, it was available to Swiss citizens living abroad. Therefore the score is 3. <sup>2</sup> Malus for use and bonus for an increased user group of 0.2 each cancel each other out, i.e. 3.

<sup>1</sup> *Petition.ch*, [openpetition.eu/ch](https://openpetition.eu/ch), change.org among others.

<sup>2</sup> <https://www.bk.admin.ch/bk/de/home/politische-rechte/e-voting/chronik.html>

Opinion formation		Participation				Decision
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
The canton has various channels on social media that are regularly used. However, there is little interaction between the canton and the users. Therefore, the score is 2. AR (23.08.21)	In the canton, voters can use <i>VoteInfo</i> . In addition, there are explanatory videos in different languages about cantonal services. Therefore, the score is 2nd bonus for information videos of 0.2, i.e. 2.2.	The canton makes minutes of cantonal council meetings, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly.	No online petition platform is used in the canton. Therefore the score is 1.	The canton has neither an e-government portal nor an eID. An online counter is available at the Road Traffic Office. Therefore, the score is 1. Bonus for online counter of 0.2, i.e. 1.2. <sup>3</sup>	There is neither e-voting nor the legal basis for it in the canton. Therefore the score is 1.
No digital deliberation platforms are available in the canton. Therefore, the score is 1. AI (21.08.21)	In the canton, female voters have <i>VoteInfo</i> at their disposal. That is why the score is 2.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly.	In the canton, there is a non-party private online petition platform that is used occasionally. Therefore the score is 2.	The canton has neither an e-government portal nor an eID. However, a portal is available for downloading the documents of the Landsgemeinde. Therefore, the score is 1. bonus for online portal, i.e. 1.2.	There is neither e-voting nor the legal basis for it in the canton. Therefore the score is 1.

<sup>3</sup> In reality, the score is 1. But for mathematical reasons, not all values of a dimension can be 1. So we had to give a bonus, which we thought was the most relevant for the online portal, as it allows interaction between the state and the population.

Opinion formation		Participation				Decision
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
The canton has various channels on social media that are used regularly. There is sometimes interaction between the canton and the users. Therefore, the score is 2. bonus for use of 0.2, i.e. 2.2.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . That is why the score is 3.	The canton provides minutes of Land Council meetings, government reports and important statistics online as PDF files. The business of the Land Council is available as Excel sheets and graphically processed. Therefore, the score is 3.	Canton held conference hearings on Zoom as a result of the Corona pandemic. Therefore, the score is 2.	In the canton there are several non-party private online petition platforms that are used occasionally. Therefore, the score is 2nd bonus for diversity of 0.2, i.e. 2.2.	The canton has neither an e-government portal nor an eID. Therefore, the score is 1.	There is a legal basis for e-voting in the canton. That is why the score is 2.
BS (23.08.21)	BL (25.08.21)					

## 4 Politbaukasten

Opinion formation		Participation				Decision
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
The canton has various channels on social media that are used regularly. There is sometimes interaction between the canton and the users. Therefore, the score is 2. bonus for use of 0.2, i.e. 2.2.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . That is why the score is 3.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly.	In the canton there are several non-party private online petition platforms that are used occasionally. Therefore, the score is 2nd bonus for diversity of 0.2, i.e. 2.2.	The canton has an e-government portal where you can log in without verifying your identity. The login is very intuitive via a central button. Therefore, the score is 2.	There is currently no e-voting available in the canton. In the past, it was available to Swiss Abroad, pilot groups and persons with disabilities. Therefore, the score is 3. Malus for use and bonus for an increased user group of 0.2 each cancel each other out, i.e. 3.
BE (23.08.21)	FR (24.08.21)					

Opinion formation		Participation				Decision
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
In Geneva, a digital deliberation platform is available on which e-consultation is also carried out. There is little interaction. Therefore, the score is 4. Bonus for connection with other tool and malus for use of 0.2 each cancel each other out, so, 4. <sup>5</sup>	GE (17.08.21)	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton has its own consultation platform on which deliberations can also be held. This is regularly used for consultations. Therefore, the score is 4. Bonus for use and connection with other tool of 0.2 each, i.e. 4.4.	In the canton there are several non-party private online petition platforms that are used occasionally. Therefore, the score is 2nd bonus for diversity of 0.2, i.e. 2.2.	The canton has an e-government portal where you can log in without verifying your identity. However, this must be verified for all functions. The login is very intuitive via a central button. There are several different logins. Therefore, the score is 3. Bonus for user-friendliness and malus for different portals of 0.2 each cancel each other out, i.e. 3.2.	There is currently no e-voting available in the canton. In the past, it was available to Swiss citizens living abroad and, in some cases, to all eligible voters. Therefore, the score is 3. Malus for use and bonus for an increased user group of 0.2 each cancel each other out, i.e. 3.

5 [participer.ge.ch](http://participer.ge.ch)

Opinion formation		Participation				Decision
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	GL (23.08.21)	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations are held occasionally. Therefore the score is 1.	In the canton, there is a non-party private online petition platform that is used occasionally. Therefore the score is 2.	The canton has neither an e-government portal nor an eID. Therefore, the score is 1.	There is currently no e-voting available in the canton. In the past, it was available to Swiss citizens living abroad. Therefore, the score is 3. Malus for use and bonus for an increased user group of 0.2 each cancel each other out, i.e. 3.
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	GR (24.08.21)	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3. <sup>6</sup>	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly. Therefore, the score is 1. bonus for use of 0.2, i.e. 1.2.	In the canton, there is a non-party private online petition platform that is rarely used. Therefore, the score is 2. Malus for use of 0.2, i.e. 1.8.	The canton has various online counters where you can register. For some of them, a verification of the personality is required. Therefore, the score is 2. malus for various portals of 0.2, i.e. 1.8.	There is currently no e-voting available in the canton. In the past, it was available to Swiss citizens living abroad. Therefore, the score is 3. Malus for use and bonus for an increased user group of 0.2 each cancel each other out, i.e. 3.

6 Normally, the Canton of Graubünden also provides the results of the votes in the Grand Council in Excel format. However, the COVID-19 pandemic prevented it from sitting in parliament and the electronic vote counting system was, therefore, not available. For this reason, the results were not published as a file.

Opinion formation		Participation				Decision
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . That is why the score is 3.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations are held occasionally. Therefore the score is 1.	No online petition platform is actively used in the canton, although one would be available. Therefore the score is 1.	The canton has an e-government portal where you have to register with an eID. Therefore, the score is 4 points.	There is neither e-voting nor the legal basis for it in the canton. Therefore the score is 1.
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters can use <i>VoteInfo</i> and <i>smartvote</i> . In addition, there are active measures for digital political education and the canton publishes explanatory videos on YouTube on the cantonal bills. Therefore, the score is 4. Bonus for information videos of 0,2, i.e. 4,2. <sup>7</sup>	In addition to the minutes of the cantonal council meetings, the canton provides the government reports with a fully developed OpenData portal. Therefore, the score is 4.	The canton uses the software E-Mitwirkung. This is not yet the standard. Therefore the score is 4.	In the canton, there are several non-party private online petition platforms that are used regularly. Therefore, the score is 2nd bonus for use and diversity of 0,2 each, i.e. 2,4.	The canton has neither an e-government portal nor an eID. Therefore, the score is 1.	There is currently no e-voting available in the canton. In the past, it was available to Swiss citizens living abroad. Therefore, the score is 3. Malus for use and bonus for an increased user group of 0,2 each cancel each other out, i.e. 3.

7 entdecke.lu.ch

Opinion formation		Participation				Decision
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . That is why the score is 3.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	Materials can be submitted by mail. There are occasional consultations. Therefore the score is 1.	In the canton, there is a non-party private online petition platform that is used occasionally. Therefore the score is 2.	The canton has an e-government portal where one must log in with a verified login. Verification of identity on site is necessary. The login is very intuitive.	There is currently no e-voting available in the canton. In the past, it was available to Swiss Abroad and individual pilot groups. Therefore, the score is 3. Malus for pilot projects and bonus for an increased user group of 0,2 each cancel each other out, i.e. 3.
The canton has various channels on social media that are used regularly. There is sometimes interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters can use <i>VoteInfo</i> . In addition, there are explanatory videos on the cantonal proposals. Therefore, the score is 2. bonus for information videos of 0,2, i.e. 2,2.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly.	In the canton, there is a non-party private online petition platform that is rarely used. Therefore, the score is 2. Malus for use of 0,2, i.e. 1,8.	Therefore, the score is 1. bonus for use of 0,2, i.e. 1,2.	The canton has an e-government portal where you can log in without verifying your identity. The login is very intuitive via a central button. Therefore, the score is 2. bonus for user-friendliness of 0,2, i.e. 2.

Opinion formation		Participation				Decision
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, female voters have <i>VoteInfo</i> at their disposal. That is why the score is 2.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly. Therefore, the score is 1. bonus for use of 0.2., i.e. 1.2.	No online petition platform is used in the canton. Therefore the score is 1.	The canton has an e-government portal where you can log in without verifying your identity. The login is very intuitive via a central button. The login is not necessary for using the e-services. Therefore, the score is 2. Bonus for user-friendliness and malus for limited use of the portal of 0.2 each cancel each other out, i.e. 2.	There is a legal basis for e-voting in the canton. That is why the score is 2.
Several online comment columns of newspapers are available in the canton. Therefore, the score is 1. bonus for diversity of 0.2, i.e. 1.2.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . That is why the score is 3.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly. Therefore, the score is 1. bonus for use of 0.2., i.e. 1.2.	No online petition platform is used in the canton. Therefore the score is 1.	The canton has its own eID solution. Therefore, the score is 4 points.	There is currently no e-voting available in the canton. In the past, it was available to Swiss citizens living abroad. Therefore, the score is 3. Malus for use and bonus for an increased user group of 0.2 each cancel each other out, i.e. 3.
<b>OW (06.09.21)</b>	<b>HS (23.08.21)</b>					

Opinion formation		Participation				Decision
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
No digital deliberation platforms are available in the canton. Therefore, the score is 1.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . Therefore the score is 3.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly. Therefore, the score is 1. bonus for use of 0.2., i.e. 1.2.	In the canton there are several non-party private online petition platforms that are used occasionally. Therefore, the score is 2nd bonus for diversity of 0.2, i.e. 2.2.	The canton has neither an e-government portal nor an eID. Therefore, the score is 1.	There is a legal basis for e-voting in the canton. That is why the score is 2.
<b>SZ (06.09.21)</b>	<b>SO (30.08.21)</b>					
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . In addition, there are active measures for digital political education. Therefore, the score is 4. <sup>8</sup>	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations are held occasionally. Therefore the score is 1.	In the canton, there are several non-party private online petition platforms that are used regularly. Therefore, the score is 2nd bonus for use and diversity of 0.2 each, i.e. 2.4.	The canton has an e-government portal where you can log in without verifying your identity. However, this must be verified for all functions. The login is very intuitive via a central button. Therefore, the score is 3. bonus for user-friendliness of 0.2, i.e. 3.2.	There is currently no e-voting available in the canton. In the past, it was available to Swiss Abroad and individual pilot groups. Therefore, the score is 3. Malus for use, malus for pilot projects and bonus for an increased user group of 0.2 each cancel each other out, i.e. 2.8.

Opinion formation		Participation		Decision	
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID
				eVoting	
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . That is why the score is 3.	In addition to the minutes of the cantonal council meetings, the canton provides the government reports with a fully developed OpenData portal. Therefore, the score is 4.	The canton has used the e-participation software a few times. This is not the standard. Therefore, the score is 4. Malus for use of 0.2, i.e. 3.8.	In the canton, there are several non-party private online petition platforms that are used regularly. Therefore, the score is 2nd bonus for use and diversity of 0.2 each, i.e. 2.4.	The canton has an e-government portal where you can only register with verification of identity. That is why the score is 3.
The canton has various channels on social media that are rarely used. There is also little interaction between the canton and the users. Therefore, the score is 2. Malus for use of 0.2, i.e. 1.8.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . That is why the score is 3.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations are held occasionally. Therefore the score is 1.	In the canton, there is a non-party private online petition platform that is rarely used. Therefore, the score is 2. Malus for use of 0.2, i.e. 1.8.	The canton has neither an e-government portal nor an eID. Therefore, the score is 1.

Opinion formation		Participation		Decision	
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID
				eVoting	
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . That is why the score is 3.	In addition to the minutes of the cantonal council meetings, the canton provides the government reports with a fully developed OpenData portal. Therefore, the score is 4.	The canton uses the software E-Mitwirkung. This is not yet the standard. Therefore the score is 4.	In the canton there are several non-party private online petition platforms that are used regularly. Therefore, the score is 2nd bonus for use and diversity of 0.2 each, i.e. 2.4.	The canton has neither an e-government portal nor an eID. Therefore, the score is 1.
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters can use <i>VoteInfo</i> and <i>smartvote</i> . In addition, there are active measures for digital political education and there are podcasts on the cantonal bills. Therefore, the score is 4. Bonus for information videos and podcasts of 0.2, i.e. 4.2.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly. Therefore, the score is 1. bonus for use of 0.2, i.e. 1.2.	In the canton, there is a non-party-linked private online petition platform that is rarely used. Therefore, the score is 1.8.	The canton has an e-government portal where you can log in without verifying your identity. The login is very intuitive via a central button. Therefore, the score is 2. bonus for user-friendliness of 0.2, i.e. 2.2.

Opinion formation		Participation		Decision	
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eVoting
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . That is why the score is 3.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations are held occasionally. Therefore the score is 1.	In the canton, there are several non-party private online petition platforms that are rarely used. Therefore the score is 2. Malus for use and bonus for diversity of 0.2 each cancel each other out, so 2.	The canton has an e-government portal where one must log in with a verified login. Verification of identity on site is necessary. Therefore, the score is 3. Malus for use and bonus for an increased user group of 0.2 each cancel each other out, i.e. 3.
The canton and the Constitutional Council have various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2. bonus for diversity of 0.2, i.e. 2.2.	In the canton, voters have <i>VoteInfo</i> and <i>smartvote</i> and CH+ at their disposal. Therefore the score is 3.2. 3rd bonus for diversity of 0.2, so 3.2.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further. Therefore the score is 3.	The canton does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly. Therefore, the score is 1. bonus for use of 0.2, i.e. 1.2.	In the canton there are several non-party private online petition platforms that are used occasionally. Therefore, the score is 2nd bonus for diversity of 0.2, i.e. 2.2.	The canton has an e-government portal where you can only log in with verification of your identity. There are several portals. Therefore, the score is 3. Malus for different portals of 0.2, i.e. 2.8

Opinion formation		Participation		Decision	
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eVoting
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters have access to <i>VoteInfo</i> and <i>smartvote</i> . That is why the score is 3.	The canton makes minutes of the sessions of the Grand Council, government reports and important statistics available online as PDF files. These are not processed further.	The canton has used the e-participation software a few times. This is not the standard. Therefore, the score is 4. Malus for use of 0.2, i.e. 3.8.	No online petition platform is used in the canton. Therefore the score is 1.	The canton has an eID solution. Therefore, the score is 4 points.
The canton has various channels on social media that are used regularly. However, there is little interaction between the canton and the users. Therefore, the score is 2.	In the canton, voters can use <i>VoteInfo</i> and <i>smartvote</i> . In addition, there are active measures for digital political education and the canton publishes explanatory videos on YouTube on the cantonal bills. Therefore, the score is 4. Bonus for information videos of 0.2, i.e. 4.2.	In addition to the minutes of the cantonal council meetings, the canton provides the government reports with a fully developed OpenData portal. Therefore, the score is 4.	The canton uses the software E-Mitwirkung. This is not yet the standard. Therefore the score is 4.	In the canton, there are several non-party private online petition platforms that are used regularly. Therefore, the score is 2nd bonus for use and diversity of 0.2 each, i.e. 2.4.	The canton has an e-government portal where you can log in without verifying your identity. Therefore, the score is 2.

Opinion formation		Participation			Decision	
e-Deliberation	Digital political education	e-Transparency	e-consultation	e-requests	eID	eVoting
The national level has various channels on social media that are used regularly. However, there is little interaction between the authorities and the users. Therefore, the score is 2.  CH (06.09.21)	At the national level, voters can use <i>VoteInfo</i> and <i>smartvote</i> . In addition, there are active measures for digital political education from various providers and explanatory videos on national bills. Therefore, the score is 4. Bonus for information videos and diversity of 0.2 each, i.e. 4.4.	At the national level, in addition to the minutes of parliament, government reports and important statistics, there are also tools available in processed form to analyse this data in depth. However, these are not united in a single portal. Therefore, the score is 5. Malus for lack of a unified platform of 0.2, i.e. 4.8.	The national level does not have a digital tool for consultations. Materials can be submitted by e-mail. Consultations take place regularly. Therefore the score is 1. bonus for use of 0.2, i.e. 1.2.	At national level, there are several non-party private online petition platforms that are used regularly. Therefore, the score is 2nd bonus for use and diversity of 0.2 each, i.e. 2.4.	Switzerland has neither an e-government portal nor an eID at the national level. Therefore, the score is 1.	At the national level, e-voting is currently not available. In the past, there have been trials with e-voting at the cantonal level. Therefore, the score is 3.

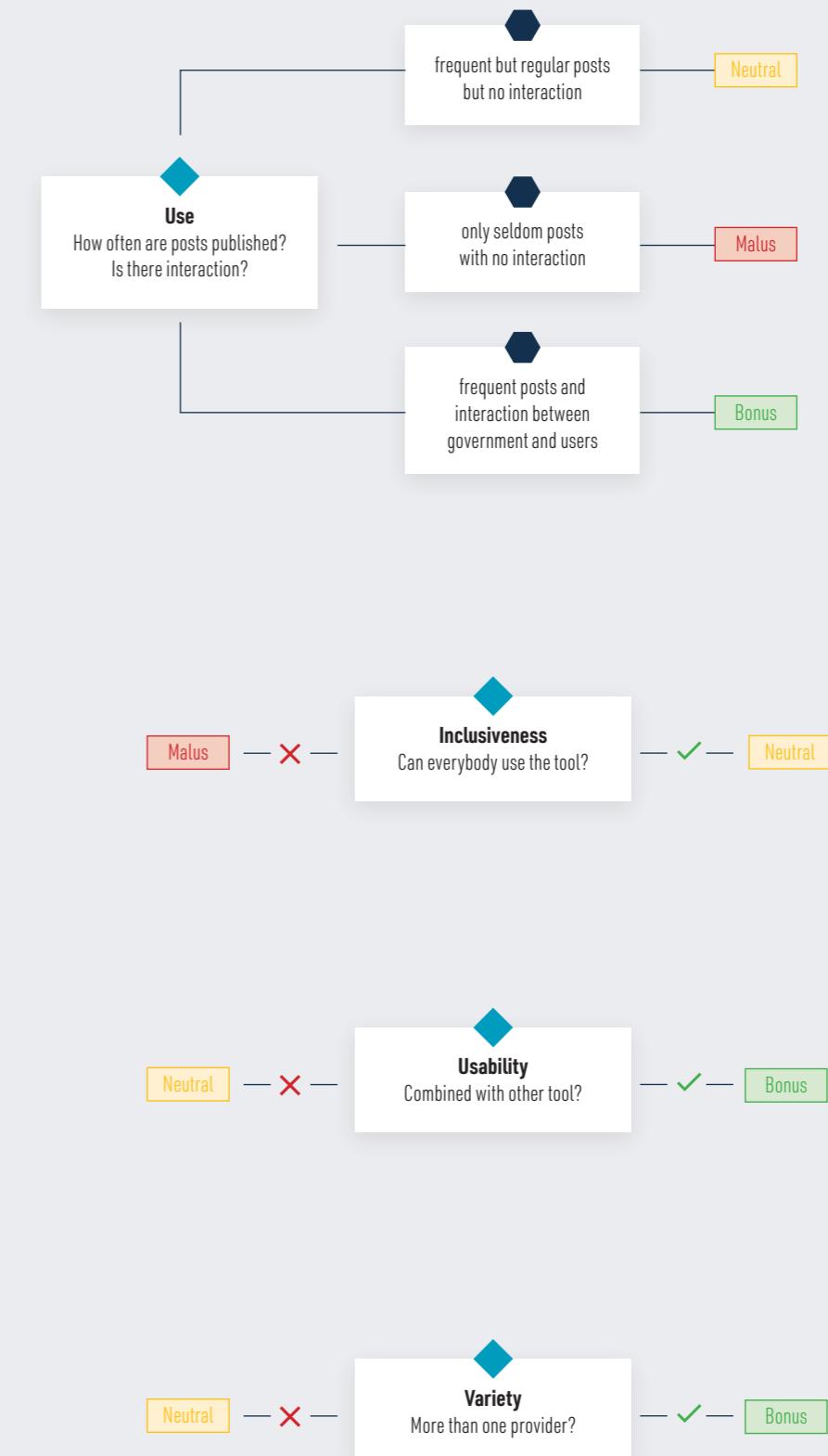
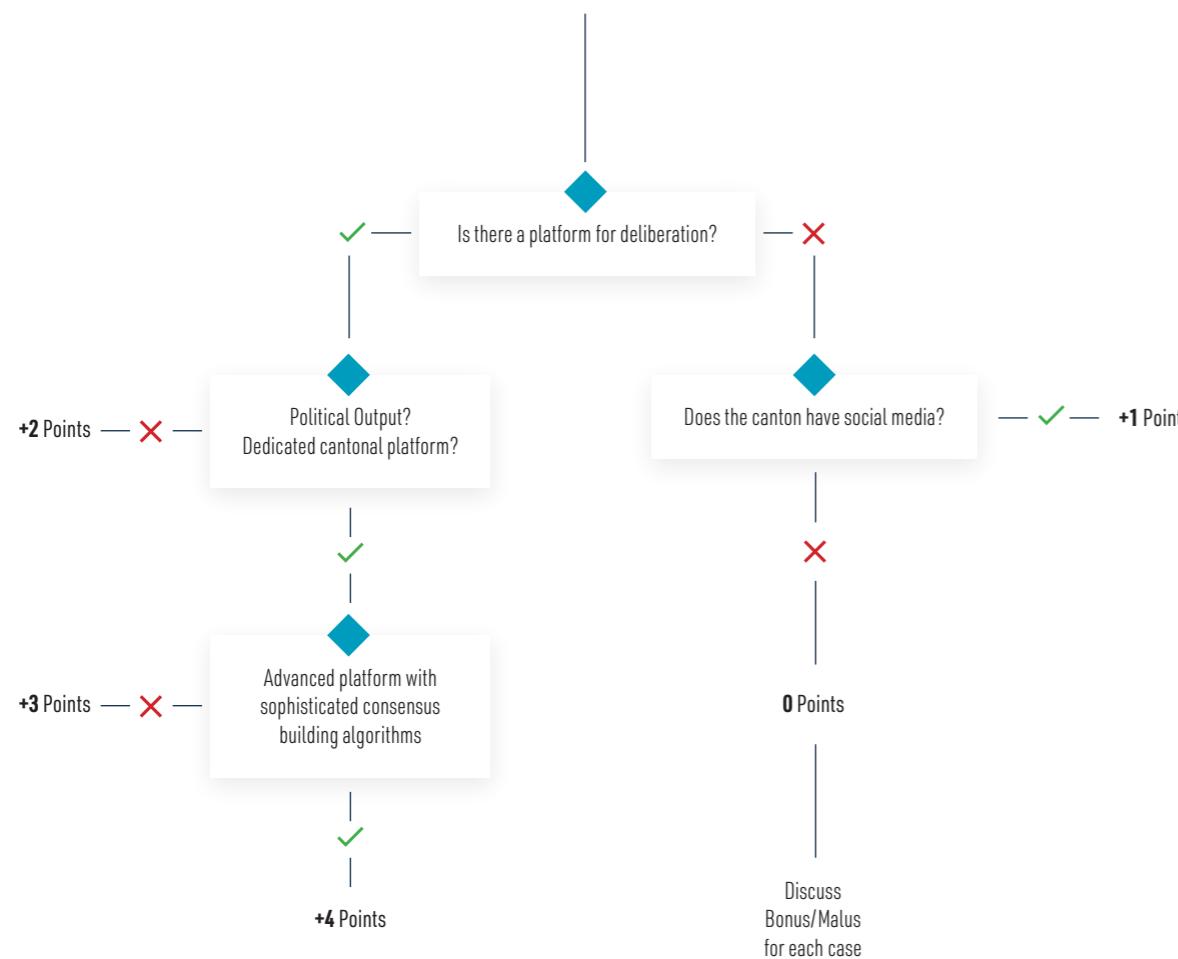
## RAW DATA

The data used is available on the website <http://digipartindex.ch>

## FLOWCHARTS

### e-Délibération

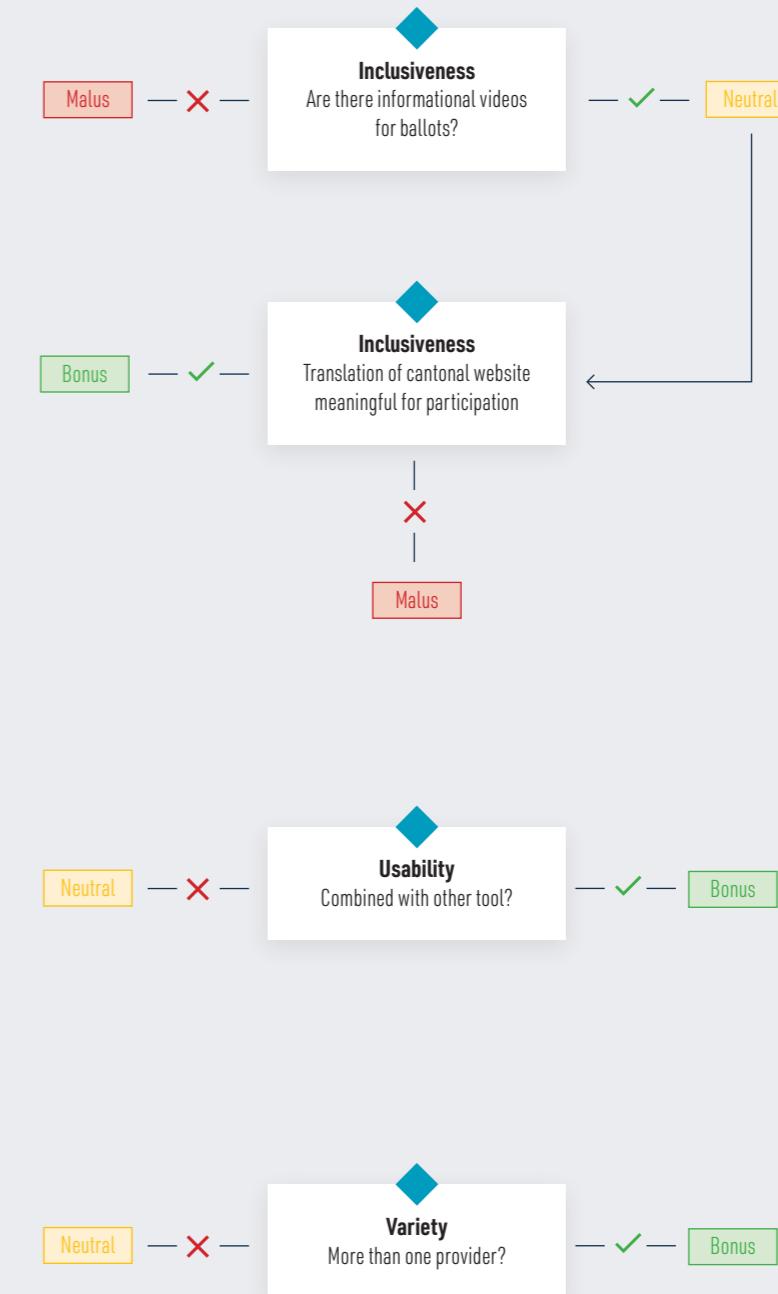
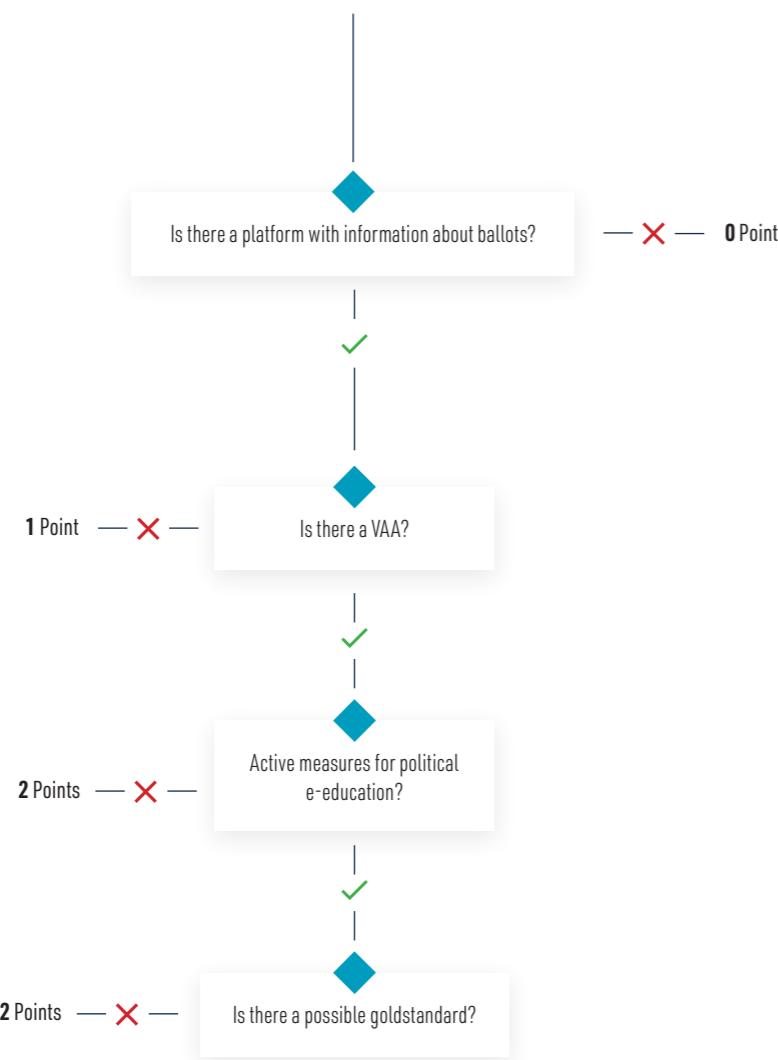
for each canton: google: "e-deliberation", "e-discussion", "politische Diskussion"



# T2

## e-Education civique

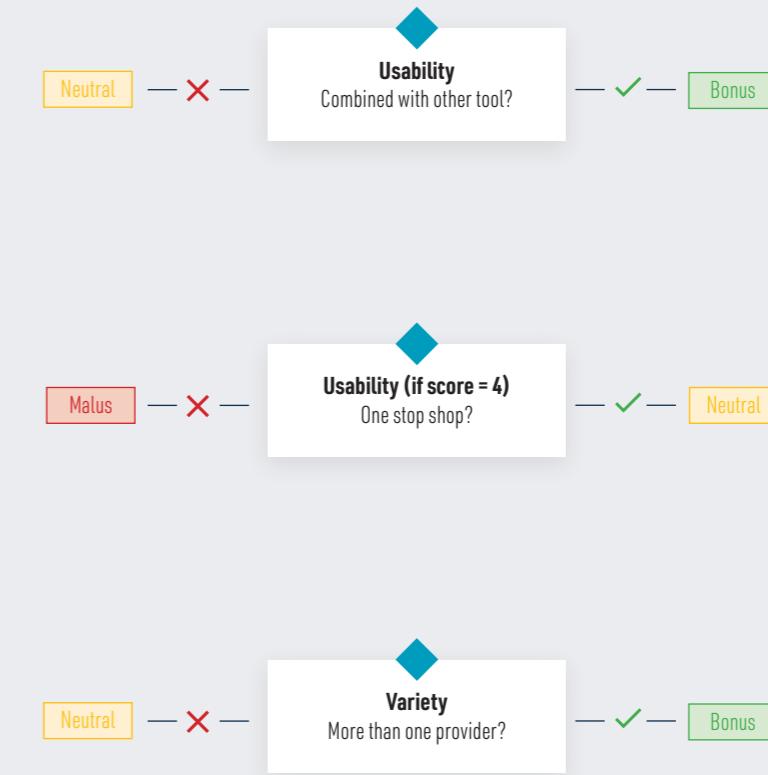
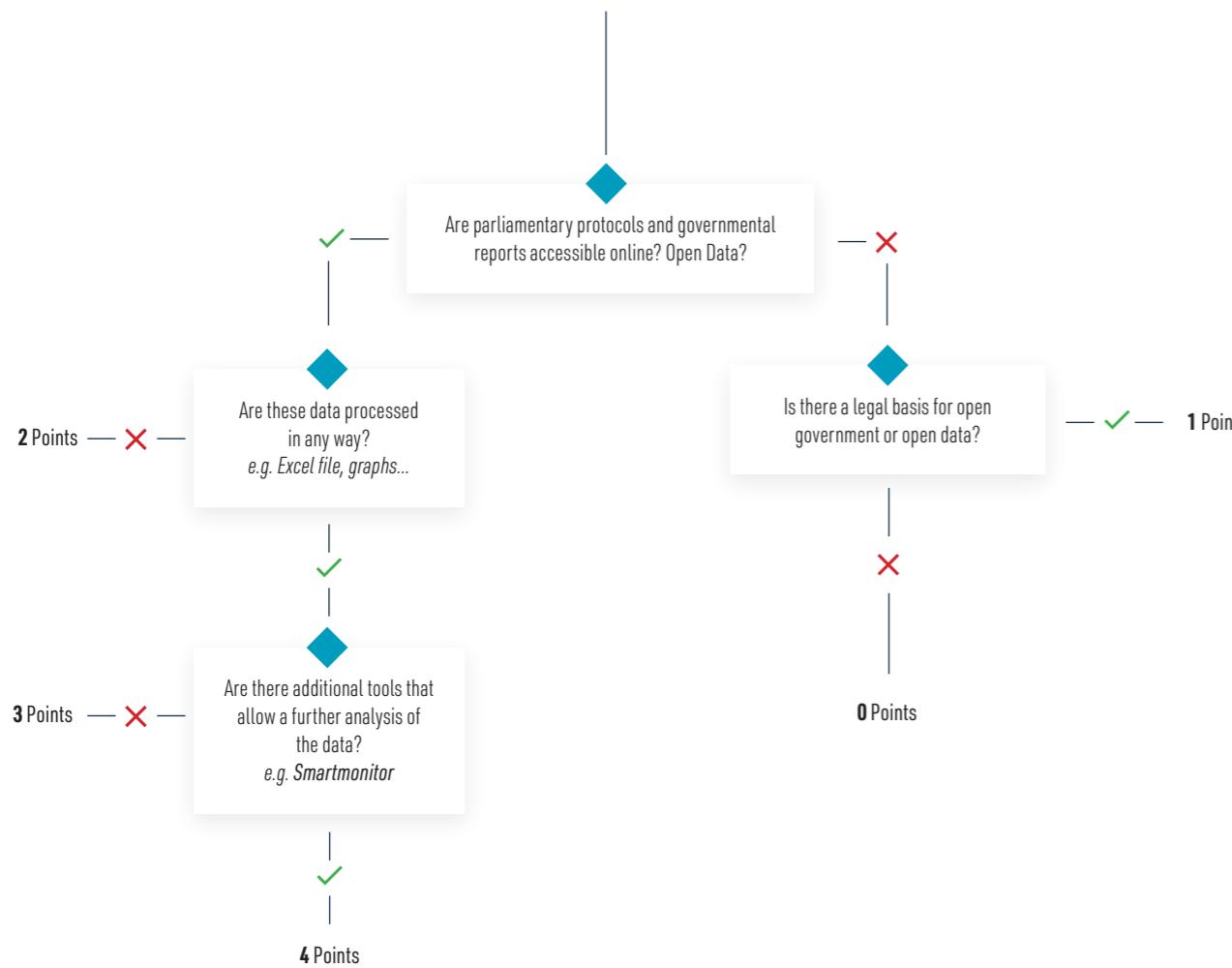
for each canton: check the App VotetInfo  
google: "politische Bildung", "politische information", "politische Diskussion"



# T3

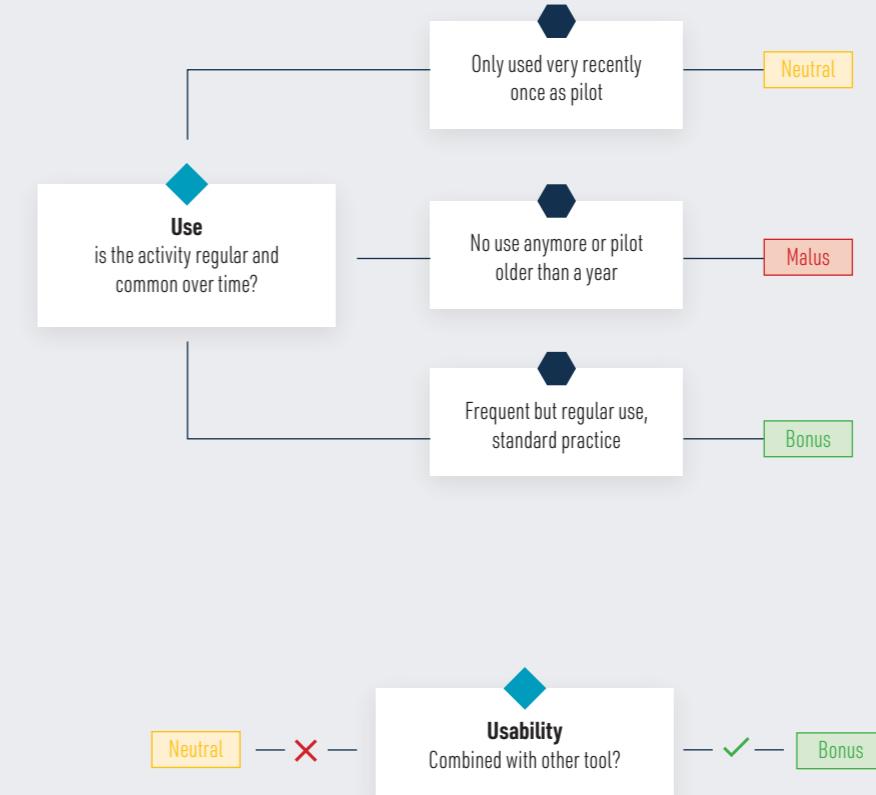
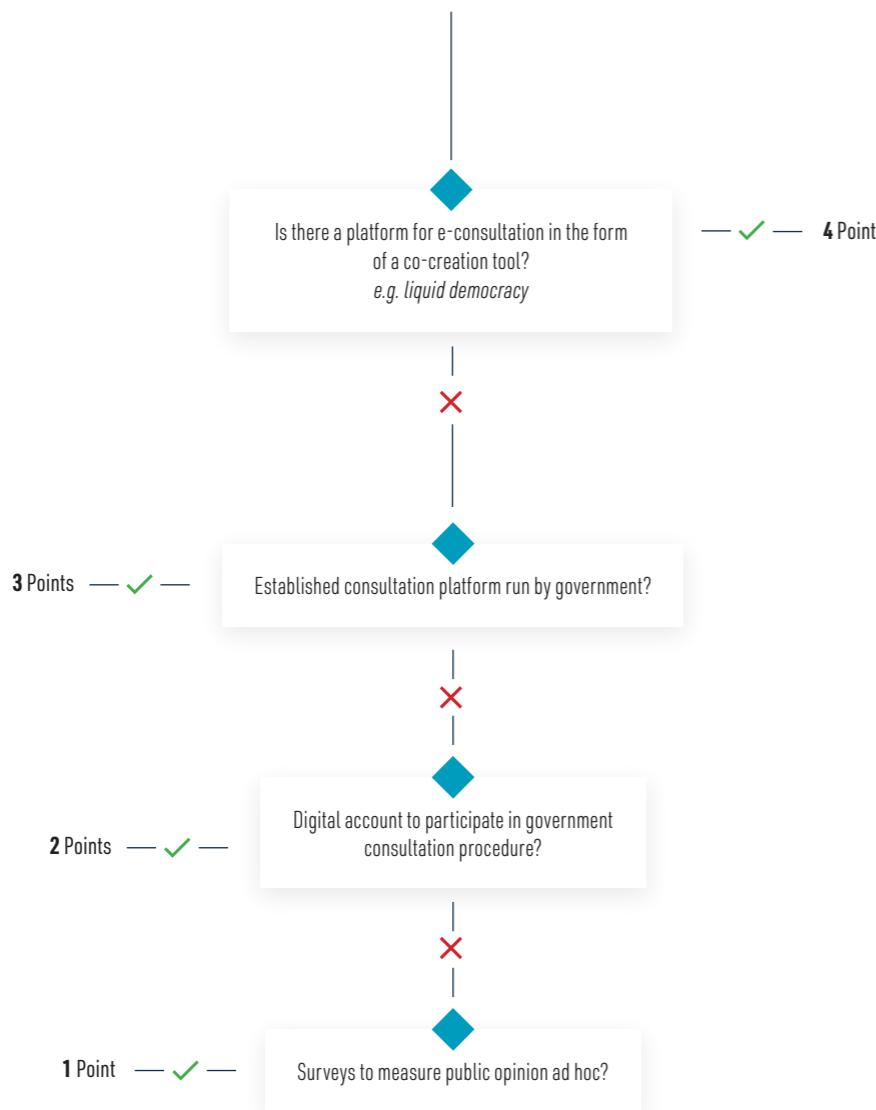
## e-Transparency

for each canton: check cantonal website (parlamente or government)  
check open data portals



# 4 e-Consultation

for each canton: google: "e-consultation", "e-concertation", "e-Mitwirkung",  
"e-Anhörung", "e-Vernehmlassung"

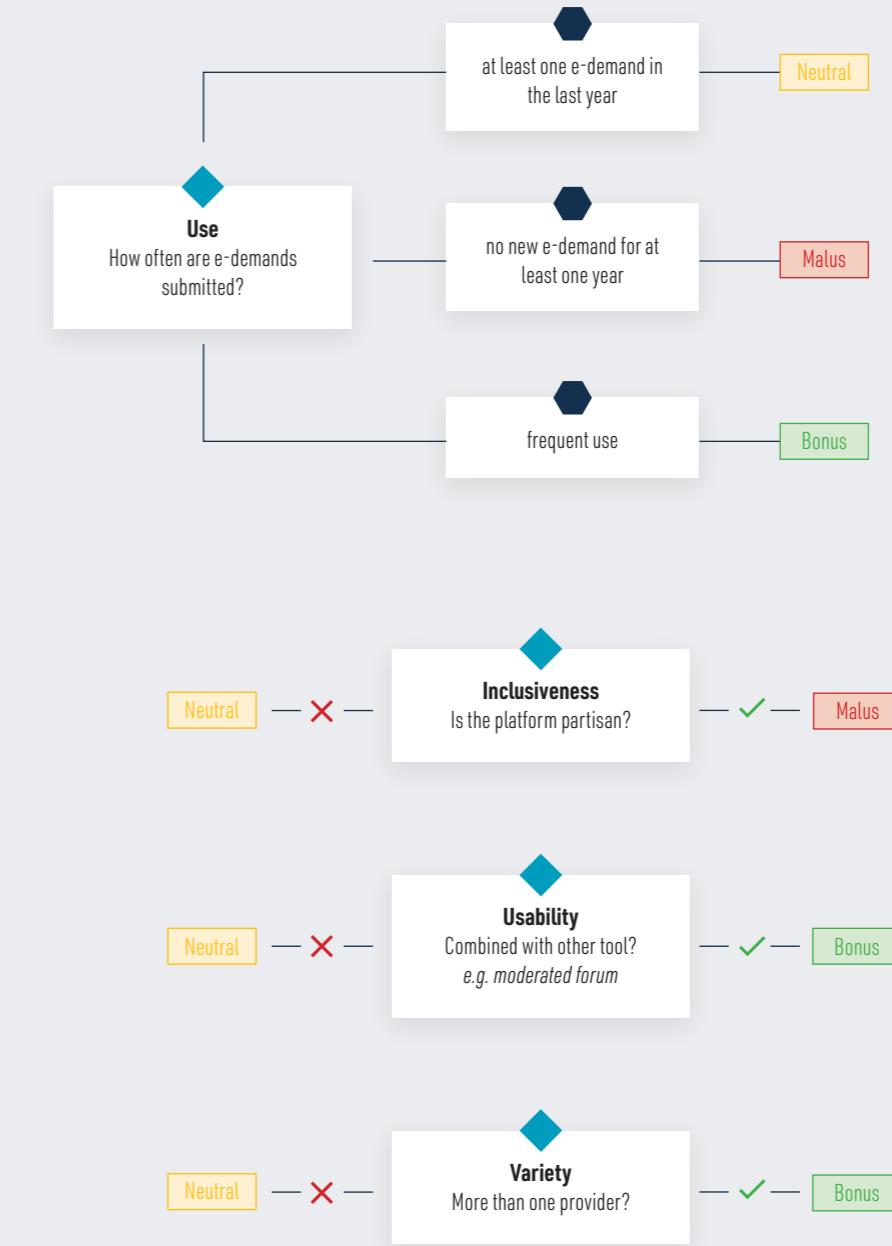
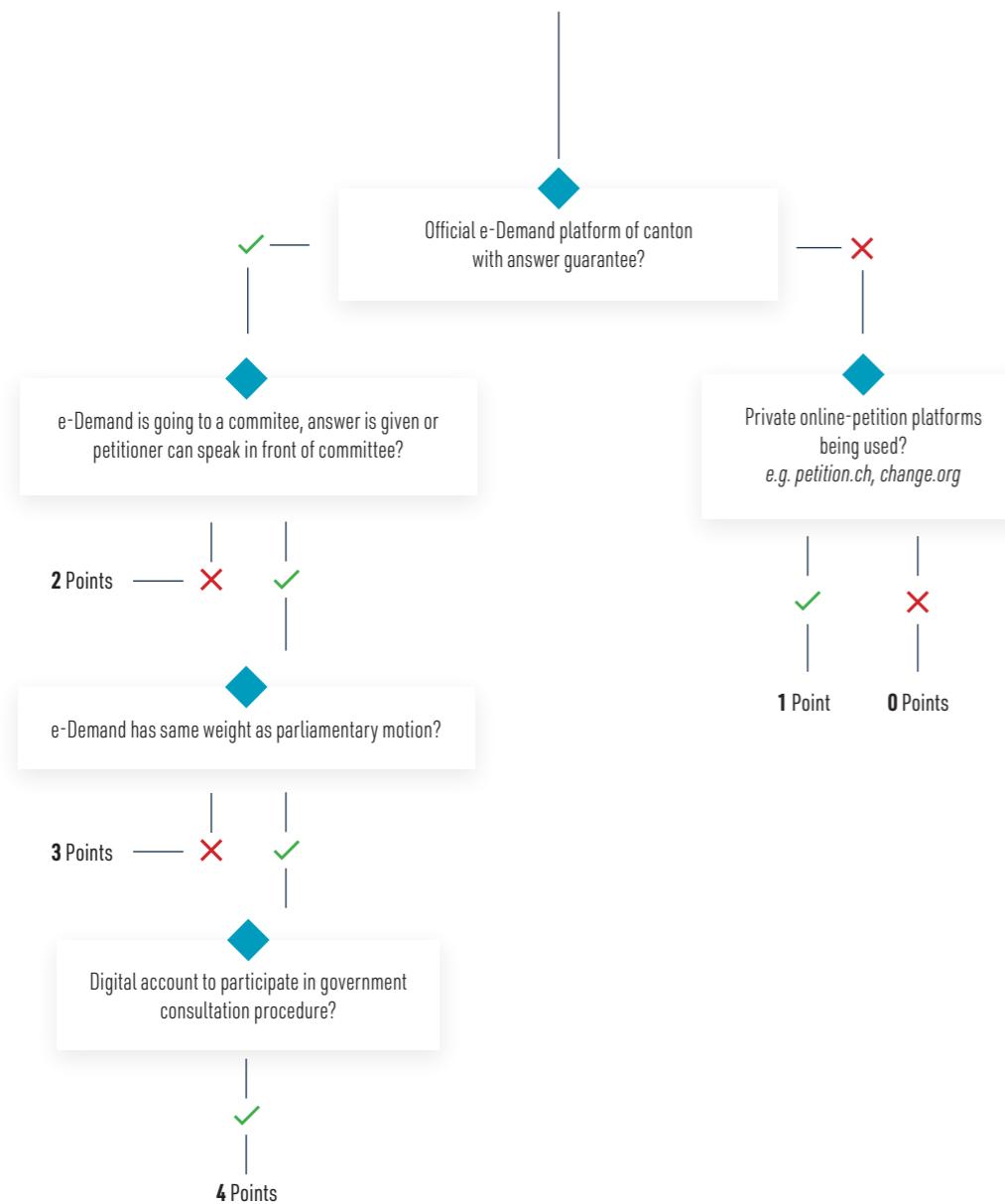


## FLOWCHARTS

# T5

## e-Requêtes

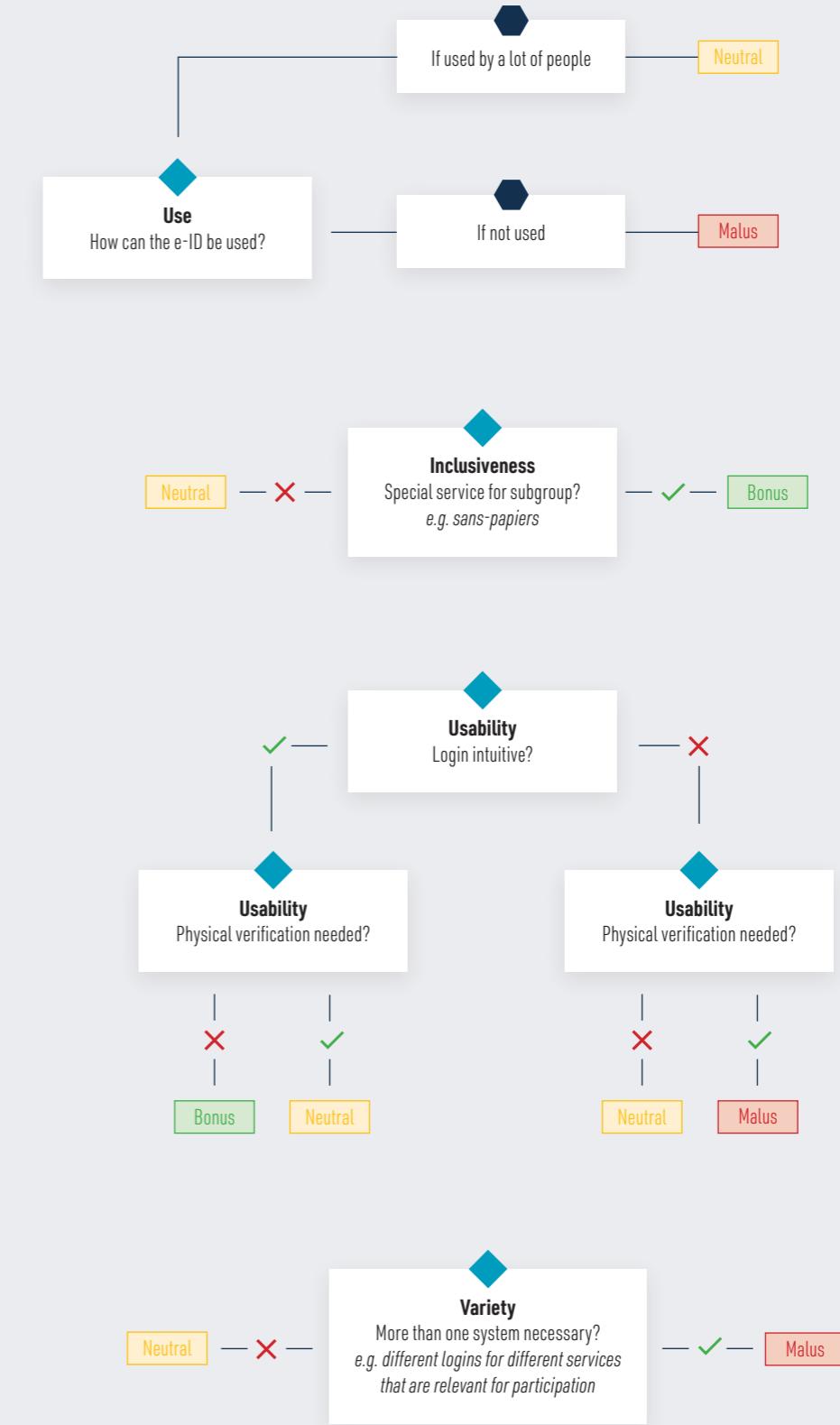
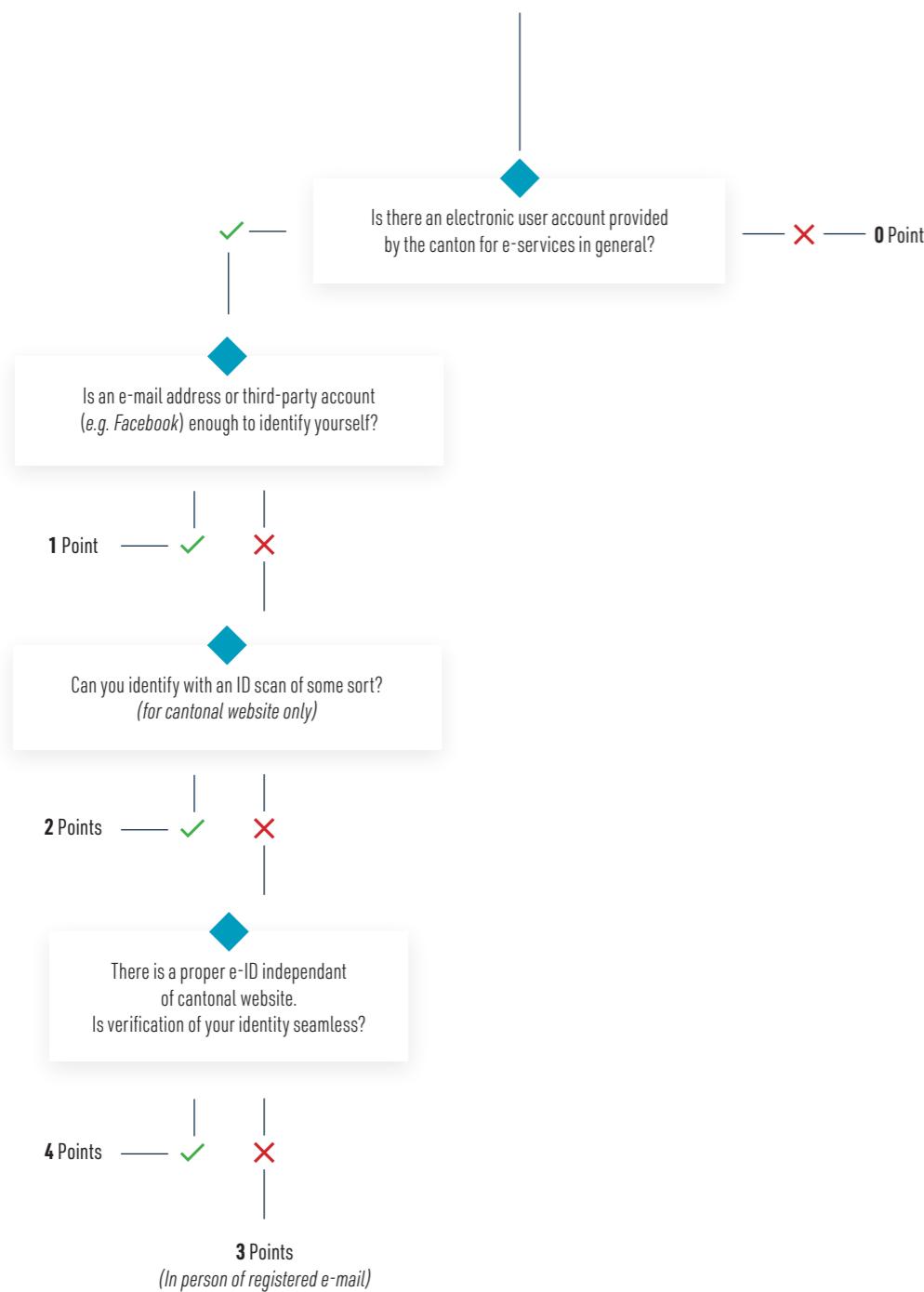
for each canton: google: "e-demand", "e-petition", "e-initiative", "e-collecting", "e-referendum"



## FLOWCHARTS

# T6 e-ID

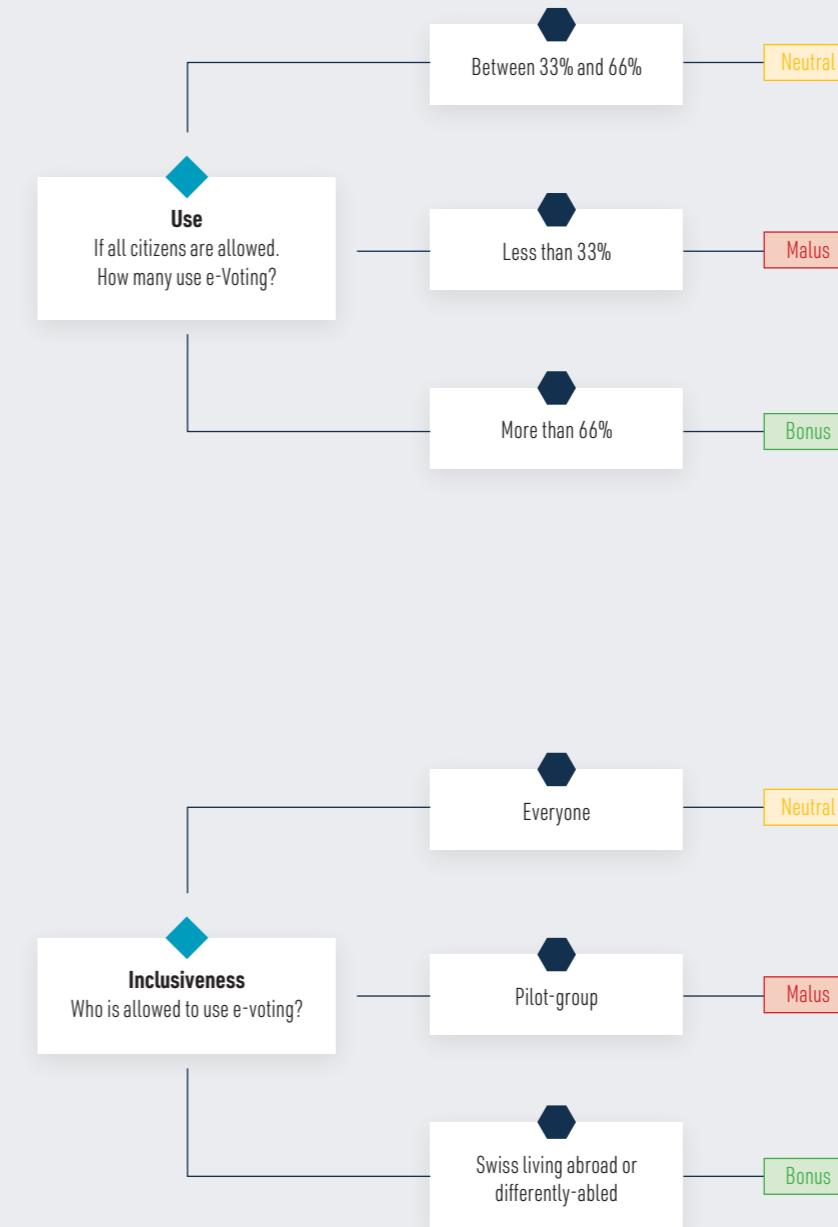
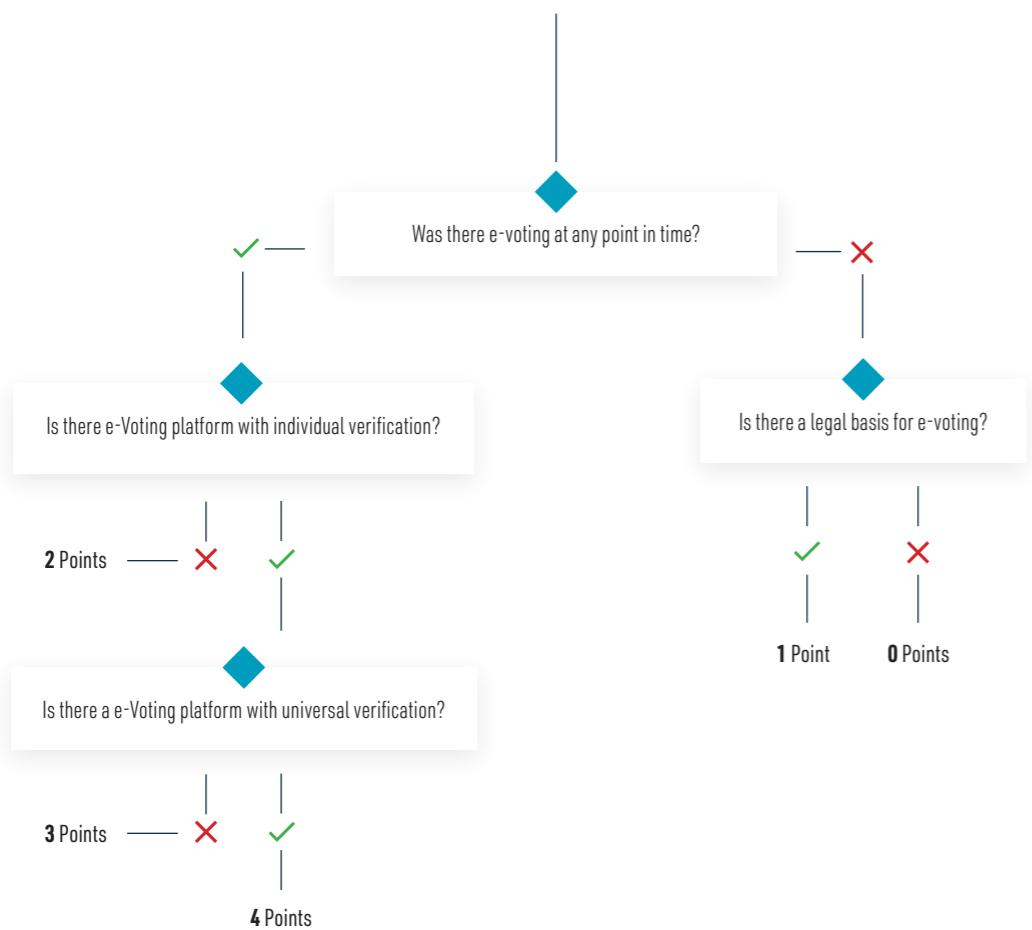
for each canton: google: "e-identification", "e-ID", "e-démarche", and check cantonal homepage



## FLOWCHARTS

### e-Vote

for each canton: google: "e-voting", "online voting", "vote électronique"



## IMPRINT

With the Digital Political Participation Switzerland project, an index is being created that will allow the state of digital political participation to be measured and compared, initially for the Swiss cantons.

The project is funded by the Digitisation + Society programme of the Mercator Foundation Switzerland. The project team is set up as a partnership between the Centre for Democracy Aarau (ZDA) at the University of Zurich and the think tank of Procivis AG.

**Project responsibility:** Uwe Serdült und Costa Vayenas

The report and data are also available on the website  
<http://digipartindex.ch>.

We would like to thank Petr Bouska, Salim Brüggemann, Sarah Engler, Simon Gemperli, Manuel Hubacher, Dominique Kunz, Thomas Milic, Rolf Rauschenbach for valuable discussions and input, as well as Laura Marsch, Riccardo Ramaccchi and Torben Stephan for project support from the Mercator team.

The authors of this report confirm that the research contained in this report represents their own analysis, was conducted independently of the institutions with which they are affiliated, and that they have received no direction, influence or instruction from those institutions or the financial sponsor as to the content or conclusions.

### Suggested citation

Uwe Serdült, Costa Vayenas, Herveline Du Clary and Gabriel Hofmann (2021): DigiPartIndex Schweiz 2021. Aarau and Zurich, Zentrum für Demokratie Aarau (ZDA) and Procivis Think Tank.  
ISBN: 978-3-906918-21-1

## ABOUT THE CENTRE FOR DEMOCRACY AARAU (ZDA)

The Centre for Democracy Aarau is a scientific research centre supported by the University of Zurich, the University of Applied Sciences Northwestern Switzerland, the Canton of Aargau and the City of Aarau. It conducts basic research and deals with current questions on democracy - regionally, in Switzerland and worldwide.

Link: [www.zdaarau.ch](http://www.zdaarau.ch)

## ABOUT THE PROCIVIS THINK TANK

The mission of the Procivis Think Tank is to study the impact of digital technologies on democracy and to contribute to the development of innovative solutions with regard to the digitalisation of public sector services and democracy. Link: [www.procivis.ch/think-thank](http://www.procivis.ch/think-thank)

### Contact

Centre for Democracy Aarau (ZDA)  
DigiPart Index Switzerland  
Villa Blumenhalde  
Küttigerstrasse 21  
CH-5000 Aarau  
[info@digipartindex.ch](mailto:info@digipartindex.ch)



Index of Digital Political Participation  
SWITZERLAND



Mercator  
Foundation  
Switzerland

**procivis**

**zde**  
Zentrum für  
Demokratie  
Aarau



Index of Digital Political Participation  
SWITZERLAND