

wennerberg kreativ4you

**Interreg**  
North Sea Region  
**BLING**  
European Regional Development Fund



EUROPEAN UNION



# Can democracy become digital?

- The possibilities of the blockchain in the Swedish democracy process -

JÖRGEN DEHLIN – LEIF WENNERBERG



The County  
Administrative  
Board of Skåne

## Background – the Bling project

The County Administrative Board Skåne, together with 12 other parties in the North Sea region, have been granted funds for the implementation of the project "Blockchain in Government" (BLING) within the framework of the EU program Interreg North Sea Region. The project started in 2019 and will end in June 2023.

The project is led by the city of Groningen in the Netherlands and the partnership includes the universities of Edingburgh, Aalborg, Gothenburg and Oldenburg, among others.

The project aims to investigate how the public sector can use blockchain technology to develop its service offerings to citizens.

For our part in Sweden, we put particular focus on how blockchain technology can contribute to increased transparency and dialogue between citizens and the public sector. Simply put: how can blockchain stimulate an expanded and improved citizen dialogue?

## How can the blockchain strengthen democracy?

In the BLING project we at the County Administrative Board take our starting point in a hypothesis that the blockchain can be used to develop the dialogue between the citizen and society. The question we want to answer within the framework of the BLING project is about participation:

– how can the blockchain be used for different forms of elections, polls and referendums?

The blockchain's most important component in building democracy is that it creates trust. With the blockchain, trust can be built into the system, because there is no single actor who is in control. Instead, it is distributed across all nodes. All users who want can thus control the system.

In concrete terms, we see great potential in the blockchain as an instrument for various types of referendums and elections. The citizen casts the vote and sees that it is stored in block on the blockchain, transparent to anyone who can read code. The vote itself is stored but the identity is not saved. It's just ticked off.

By using blockchains, a system for electronic voting can be created which makes it possible to vote from anywhere. All persons entitled to vote would be registered as users of the blockchain and every user would be assigned a vote. Users would have access to their voice through a user interface that would be accessible via an electronic device with internet connection.<sup>1</sup>

Each user would have their own password that would give access to the secret the key, which is used when the voice is registered. All votes would be saved in the blockchain in the same way as transactions. Each vote would be verified by other users before the vote becomes valid. According to the same principle as with cryptocurrencies, each vote is verified by other users via public keys.

Our conclusion is that the blockchain can definitely be used to develop democracy.

## Democracy and participation in Sweden

But let us start by give a description of the Swedish democratic system and how we in Sweden work with citizens dialogue today; without blockchain. <sup>2</sup>

We will put our focus on the regional and local levels.

### The democratic system in Sweden

In Sweden we have three democratic levels; national, regional and local.

Sweden is divided into 290 local municipalities and 20 county councils which include the regions of Gotland, Halland, Västra Götaland and Skåne.

There is no hierarchical relation between municipalities, counties and regions, since all have their own self-governing local authorities with responsibility for different activities.

The only exception is Gotland, an island in the Baltic Sea, where the municipality also has the responsibilities and tasks normally associated with a county council.

---

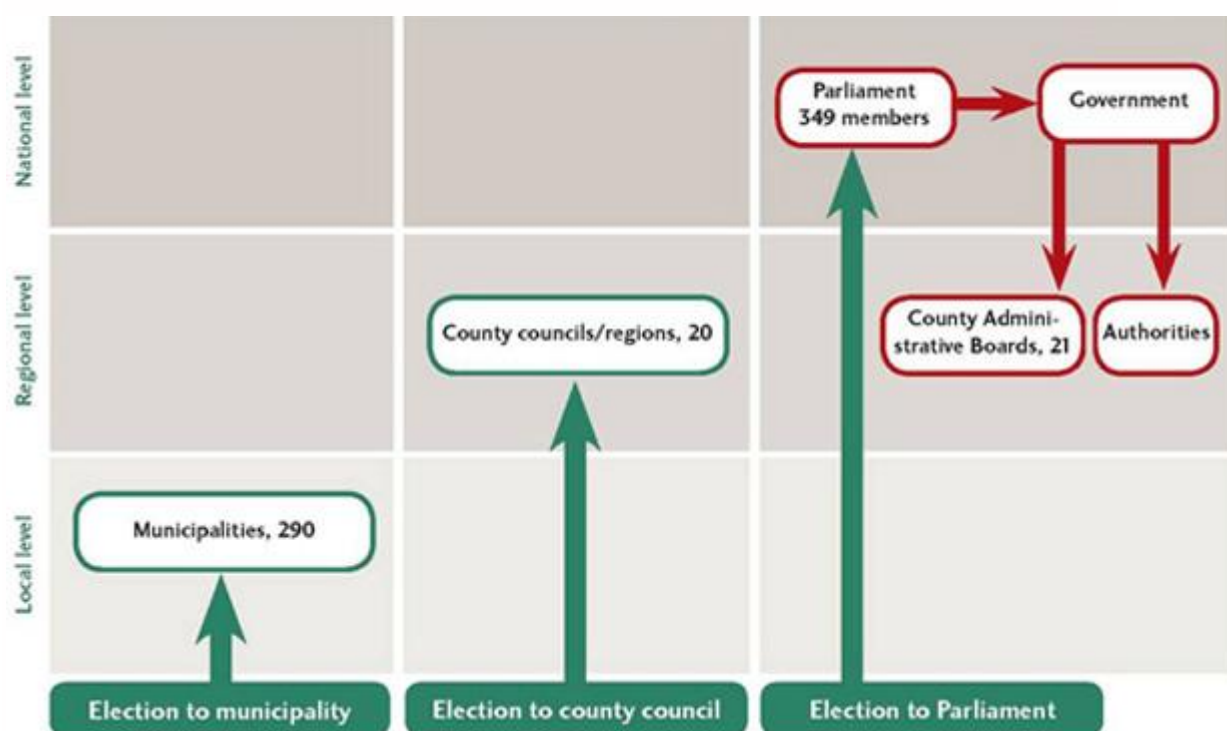
<sup>1</sup> Matias Kytömäki, Faculty of Natural Sciences and Technology, Åbo Akademi: "The blockchain and its areas of use", 2018.

<sup>2</sup> Information and texts is a summary of different reports and factsheets from the Citizen Dialogue project at the Swedish Association of Local Authorities and Regions, Stockholm.

The current Local Government Act, which came into force in 1992, defines the roles of municipalities, county councils and regions as follows:

- Municipalities are responsible for matters relating to the inhabitants of the municipality and their immediate environment.
- The main task of the county councils and regions is healthcare.
- The Swedish Parliament, or Riksdag, which has 349 members, is the supreme political decision-making body in Sweden.

The figure shows the three democratic levels and the tasks that the different actors have.



In Sweden, general elections are held every four years. Parliamentary, municipal and county/ regional elections are held on the same day as the general election.

In these elections, Swedes vote for political parties to represent them in the three political assemblies: the municipal assembly, the county council or regional assembly and the national parliament (the Riksdag).

To be entitled to vote in the municipal and county council/regional elections, voters must be at least 18 years of age and a resident of the municipality and county concerned.

Swedish citizenship is not required in order to vote in local and county/regional elections, but voters must either be citizens of another EU member state or Nordic country and registered in Sweden at the time of the election, or have been registered as a resident in Sweden for the last three years.

Municipal and county council/regional assemblies are the highest decision-making bodies at the local and regional levels. All assembly meetings are open to the public. Between assembly meetings, matters are managed by the executive committee.

People who are entitled to vote may also stand for election, provided that they are nominated by a political party. Most of those holding elected office at local and regional level are not full-time politicians. They carry out their political work alongside their ordinary jobs.

## The role of the county regions

County regions are responsible for ensuring that everyone living in Sweden has good health and equal access to good healthcare. Healthcare is largely tax financed. The principle of local self-government gives the county councils and regions the right to design and structure their activities in the light of local conditions.

The foundation of the Swedish healthcare system is the community healthcare centres. At these healthcare centres patients can be treated for all the health problems that do not require the technical and medical resources of the hospitals. Preventive health work is an important element of primary care. Highly specialized care and medical treatment are provided by hospitals.

Although dental care is provided by both public and private providers, the county regions have an overall responsibility for the provision of dental care. Dental care is free of charge for all children and young people up to the age of 19.

As in most counties, public transport is operated by the county council, often together with the municipalities. The transport services are operated by private providers contracted by the regional public transport authority.

## The role of the municipalities

In Sweden, the municipalities are responsible for a larger share of public financed services than in most other countries and they have the right to levy taxes to finance operations.

The municipalities are responsible for practically all childcare and primary and secondary education. All education in the compulsory system is free of charge. Elderly care and care of the disabled are also important tasks for the municipalities. They are also responsible for example water supply, waste disposal, spatial planning and rescue services.

These different areas of responsibility mean that the municipalities play several different roles.

- They are service providers. The municipalities are service providers in the fields of care, social services, education and infrastructure. Either on its own or as a commissioner of private actors.
- They are developers of society. Municipalities plans include housing, infrastructure and community development in general.
- And they are supervisory authorities. The municipalities have a supervisory responsibility, such as measuring air and water pollution and checking the labelling of foodstuffs.
- They are also employers. While the municipalities form part of the public sector, they are also employers with responsibility for the implementation of labour law and the provision of personnel.

The municipalities are legally or contractually responsible for example:

- Childcare and preschools
- Primary and secondary education
- Care of the elderly and disabled
- Social services
- Water supply and sewerage
- Infrastructure, traffic, public transport
- Plan and environmental issues
- Rescue services and emergency preparedness

Other services provided on a voluntary basis include for example:

- Culture and Leisure services
- Housing
- Industrial and commercial services
-

## Local self government

Local government has a long tradition in Sweden. Several hundred years ago the parishes were responsible for the care of the poor. In the mid-1800s, the municipalities were tasked with running the recently established elementary schools. When the development of the Swedish welfare state accelerated after World War II, the Parliament and the Government decided to place a great deal of the responsibility for public services with the municipalities.

One of the reasons was the belief that local administration and local responsibility could best meet local needs. Sweden's county councils were also created in the mid-1800s. Their task was to deliberate and decide on a wide range of matters concerning the county, such as the economic situation, agriculture, communications, healthcare, education and law and order.

Local self-government is important in democratic terms. Citizens' closeness to decision-making makes it easier for them to gain access to local politicians and hold them accountable for their decisions.

This in turn improves their opportunities to influence service provision in their municipality, county council or region and how their taxes are used. Since local self-government makes it possible to design services in a range of ways, it is easier to find flexible solutions that are suitable for a particular municipality, county council or region. This helps to improve the efficiency and effectiveness of service provision.

Municipalities, county councils and regions may procure services from private companies. Privately managed providers financed from tax revenue must offer the service concerned to citizens on the same conditions as those that apply to a similar public service.

Compared with other EU member states, Swedish municipalities, county councils and regions have wide-ranging responsibilities.

They largely finance themselves by means of local and county council taxes and the fees paid by the citizens for various services. Taxes are levied as a percentage of the inhabitants' income. The municipalities, county councils and regions decide on their own tax rates. The activities are also funded to some extent by government grants.

The average, overall local tax rate is 30 per cent. Approximately 20 per cent goes to the municipalities and 10 per cent to the county councils/regions.

Citizens in Sweden should have access to welfare on equal terms regardless of their place of residence. At the same time, conditions vary a great deal between municipalities, county councils and regions in different parts of the country, as do their economic ability to provide such services. To solve this problem, Sweden has a system of local government financial equalisation which is one of the most far reaching in Europe.

## Local government and the EU

Local and regional government in Sweden is influenced by the European Union in many different ways. Projects across the country are co-financed by EU structural funds, and this demonstrates how the EU co-operates with municipalities, county councils and regions in community development.

When operating as supervisory bodies, local and regional authorities apply Swedish law that follows the European acquires. Food safety, rules on water quality and animal welfare are a few examples.

Swedish municipalities, county councils and regions are important employers, and are bound by common rules governing working hours and the working environment. The European level also plays a role in the production of services, for instance when inviting tenders. EU legislation on public procurement and competition forms an integral part of such activities.

Estimates show that approximately 60 per cent of the issues dealt with by municipal and county council assemblies are directly or indirectly influenced by European funding or decisions taken by the EU.

Municipalities, county councils and regions in Sweden play an active role in a number of organisations at European level, with a view to influencing the outcome of important EU decisions. The Assembly of European Regions (AER) has 14 Swedish county councils and regions among its members, and ten Swedish coastal regions attend the Conference of Peripheral Maritime Regions (CPMR). Stockholm, Gothenburg and Malmö are part of the Eurocities network, while a number of medium-sized towns are members of Eurotowns.

Swedish municipalities, county councils and regions are also represented by offices in Brussels.

## Citizen dialogue as part of the governance process

Citizen dialogue as part of the governance process is seen by many as an important area for development in the local authority. A question that then needs to be posed is: What do you want to achieve? What do you expect to gain by introducing citizen dialogue?

In evaluations of citizen dialogue, participants are often sceptical about whether anyone has taken their views into account and whether there is a hidden agenda. Was there honest intent, or was the purpose of the dialogue just to get support for already made decisions or manipulate the participants to arrive at a desired answer? A genuine dialogue must include the potential to influence decisions.



If the politicians have already made up their minds on a particular issue, it is better to refrain from citizen dialogue and instead hold a public information meeting. The experience of local authorities that have introduced citizen dialogue is that in-house preparation is necessary before the citizens are approached. Dialogue is an interactive tool that requires preparation before, during and after its realisation.

## Different roles

Experience shows that when local authorities have decided to carry out citizen dialogue, it is not always obvious who should be responsible for planning, realisation and taking the results forward. For the results of the dialogue to become a useful basis for the politicians' decisions, the roles must be clarified before the dialogue starts.

There might be a need to discuss and clarify a number of intersections, such as:

- The allocation of responsibilities for the dialogue between the role as a party politician and the role as a politician in the council, board, committee or drafting group.
- The division of responsibilities for dialogue between politicians and officers.
- The allocation of responsibilities for citizen dialogue as distinguished from service-user dialogue.

It is important to remember that dialogue between citizens and politicians is always going on, when the individual politician meets citizens in her or his daily life, and when conversations arise around topics of concern to the individual.

Many meetings and discussions also take place between party members based around party ideology and the party's analyses of social changes. The question that the elected committee in a local authority should address is whether these dialogues are enough as a basis for good decisions. A clear international and national trend is that dialogue is needed to enable politicians to gain broader knowledge about citizens' values, to be used as a basis for decisions on important matters.

An elected representative is responsible for all local residents, and it is a challenge to gain insights into how different groups in the community view a particular issue. The key question, however, is to decide on what issue-areas we in our local authority should conduct citizen dialogue.

The second step in clarifying the roles is establishing the relationship between officers and elected representatives with regard to citizen dialogue.

It is not unusual that citizen dialogue is delegated to officers, who thereby become experts on both users' and citizens' opinions on a particular issue. This increases the gap between citizens and politicians. However, there are signs that elected representatives are looking to reclaim control over citizen dialogue and increasingly see it as their arena.

But the matter is not as simple as that. To achieve a functioning dialogue that can constitute the basis for political decisions, the dialogue needs to be carried out in a three-part collaboration between politicians, citizens and officers. The politicians get the chance to be the listeners.

In order to understand and gain a deeper understanding of citizens' views on a particular issue; they do not need to reply or defend. The officers' role is to be processleaders: to produce the information materials, lead the process based on the method chosen and to be responsible for documenting the results.

The role of the citizens is to give their views on an issue and to, together with others, argue and listen to different viewpoints. The third issue to discuss with regard to roles is who is responsible for user dialogue, and who is responsible for citizen dialogue. Both dialogues are needed, and one can never replace the other.

## Different perspectives

In a local authority, several kinds of information are needed to make decisions. There are three key perspectives:

1. The organisational perspective is something that local authorities often know well. This can include knowledge about the financial situation, work environment, need for training and laws and regulations. Knowledge about these types of issues is necessary for the running of a functioning and efficient local authority that fulfils its employer's responsibilities.
2. The user perspective means knowing how the users view the services that they receive from the local authority. This knowledge is essential to understanding the authority's ability to offer quality public services to its citizens.
3. The citizens' perspective is the citizens' views on whether the local authority does the right things, at the right costs and with the right quality, seen from the perspective of tax-paying citizens. It tends to be the citizens' perspective that local authorities know the least about, and where systematic analysis is most lacking. Without a systematic approach to finding out how different groups view the authority's performance, there is a risk that those who shout the loudest are most influential.

Each of the three perspectives is as important as the others; you cannot exclude any of them or replace one with another. Conscious working methods and processes are needed for all three perspectives, but the need to develop systems becomes most obvious in the citizens' perspective.

## What topics the dialogue should address?

If the politicians have already made up their minds on a particular issue, they should not initiate a citizen dialogue.

Running a dialogue where people discover that they cannot influence anything only increases the public's mistrust of the organisation and its representatives. Instead, you could in these cases create a basis for future involvement by informing about the background to the decision and its reasons and consequences.

Clear information and transparency about decisions already made makes it possible for citizens to be well informed and is the first step to involvement. A local authority makes a lot of decisions during a year, and it is not possible to run a dialogue on all of them.

Two questions can help identify which issues require dialogue:

1. Do we, as elected representatives, need more knowledge about the citizens' values, priorities and opinions on this matter in order to make the best possible decision?
2. Could a citizen dialogue on this matter give people better knowledge about the local authority's responsibilities and need for prioritisations?

There are really no topics on which people could not have an opinion, with the exception of decisions that concern private individuals.

In Toronto, Canada the municipality introduced a system of governance, some years ago, where citizen dialogue is an integral part. Before decisions are made, three processes are carried out in order to produce the best possible basis for decision making.

*Phase 1. The decision process* – aims to provide a clear structure for the administrative process before a decision. Before every decision, the politicians consider whether to carry out a citizen dialogue to obtain better knowledge of people's values and views on the matter in question.

*Phase 2. The consultation process* – if it is decided that a dialogue is needed, the next step is to determine the structure for when, how and where the dialogue should happen, and within what boundaries.

*Phase 3. The communication process* – the local authority realises that they will not be able to reach everyone through citizen dialogue, but the aim is to make it possible for all citizens to be well informed. This is done by outlining a clear process for how the citizens will be informed of the decision and the path leading up to it. It is a question of being proactive rather than reactive in the contacts with the media, as well as working with information materials produced in-house.

The Toronto experiences show that the municipality carries out citizen dialogue on more and more issues. The initial fears that lobby groups would dominate or that dogmatists would come up with crazy ideas proved to be totally unfounded and the citizens' competence and responsible attitudes toward the development of the local community is impressive.

## 5 different levels of participation

In face of the decisions to be made, you should consider how you can enable the citizens to take part. It is also important to be clear towards the citizens about what level of participation they can expect.

1. *Information* – in order to participate, a person needs to be well informed and able to absorb facts about the issue at hand. Some decisions are not suitable for citizen dialogue, but people have a right to be informed about what decisions have been made. A transparent local authority builds trust and confidence.
2. *Consultation* – means giving citizens the opportunity to say what options they think are preferable in a particular question. The starting point here is a set of options prepared by experts or officers and accepted by the elected representatives; the citizens may then decide whether they prefer option 1 or 2, or A or B.
3. *Dialogue* – means giving people the opportunity to meet others to engage in dialogue on a topical issue. The starting point is that everyone should have the opportunity to make his or her voice heard and present arguments for his or her view in the matter. There is no need to reach a consensus.
4. *Involvement* – means that people participate during a longer period of time and are involved in a development process, from a blank sheet of paper to a finalised proposal that will form the basis for political decisions. This is participation at a deeper level.
5. *Co-decision-making* – the elected assembly has delegated responsibility to a committee or board, where the delegates are not elected on the basis of party membership but as individuals.

The different levels of participation should be seen as an aid in the structuring of citizen dialogue in relation to the decisions that the politicians will make. The starting point should always be the particular circumstances of the local authority.

## Reaching those who are seldom heard

How do we avoid the problem that is often raised today, namely that citizen dialogue means giving those who already have resources yet another way to influence?

How do we listen to everyone, not just to lobby groups and those who shout the loudest?

It is important to stress, however, that there are already people who try to influence by “shouting the loudest,” and lobby groups who seek out elected representatives to give their views on particular issues. Experience shows that when local authorities have carried out citizen dialogue, it has generally been through invitations to places and forums that the politicians and officers are familiar with.

To many groups in the society, it feels neither natural nor comfortable to come to these meetings. An international trend for coming to grips with this problem is to both invite and reach out to people in the community. It is a matter of gaining a good understanding of how the citizens want to communicate and engage in dialogue with the local authority.

This means that using the same dialogue approach for all citizens is not enough. When only a few people turn up to the meeting that you have arranged, you cannot draw the conclusion that nobody is interested and be satisfied with that. If you seriously want to know people’s values, priorities and opinions, you have to actively take responsibility to find the methods that suit different groups in the community.

International experience shows that you have to depart from traditional meetings and develop new approaches to dialogue. You can do this by using new technology, through outreach activities and through cooperation with civil society organisations or key individuals who are well networked in particular fractions of the community.

## The dialogue must give some meaning

Citizen dialogue must be meaningful. If we want to create engagement among people, a win-win perspective is necessary. People must know that they are being listened to, and get feedback on how their views have been taken into account.

Below are a number of success factors that must be included for the dialogue to be seen as meaningful.

- Dialogue should take place early in the decision process
- Politicians and officers must show honest intent
- The issue at hand must be of interest to people
- Citizen dialogue should be build into the governance system and schedule
- There should be a clear purpose and clear boundaries
- Combining invitations and outreach activities help reach more people
- Visualise
- Feedback

The politicians and the administration must feel that it is important to obtain knowledge about the citizens' views on the issue at hand. This means having both a structure for citizen dialogue and a culture of focusing on the citizens. Some local authorities have reformed their governance structures to be more citizen-oriented, but that is not enough.

Based on the structure, you must also develop an institutional culture where the citizens are in focus, and where the advantages of citizen engagement are seen both from a democracy perspective and an efficiency perspective.

Citizen dialogue must happen early in the decision-making process, when there is time to actually consider the views that are expressed. For public trust in the organisation to increase, it is important that people feel that they are really able to influence decisions and that the dialogue is not just for show.

A clear purpose and boundaries is also important when it comes to creating trust. All participants must be made aware of the rules. There is never a wishing well; decisions at the local authority level are about prioritisations. It must also be made clear that the dialogue plays an advisory role.

The final decision is made by the elected representatives, and the result of the dialogue is one among a number of factors that form the basis of their decision. As already mentioned, the local authority must work actively to invite and seek people out if they are to reach more people than those who always show up.

Of course, you should not stop talking to the organisations and individuals who always participate, but the local authority also needs to find new ways of reaching those who seldom take part. This is necessary in order to gain an understanding of what different groups think about the matter in question. In local authorities we are used to handling matters with the aid of written documents. But people absorb information in different ways.

To visualise the circumstances of the decision to be made has proven a successful method when it comes to improving citizens' understanding of the different factors and prioritisations that need to be taken into account before a decision is made.

Feedback is essential. In studies people have spoken about their experiences of participating in meetings and giving their opinions, and then not being told how their views were used. They feel that their input disappeared into a black hole and are left with the feeling that what was said was of no interest.

Feedback is necessary to build confidence in the dialogue and the organisation. Even if the views expressed are not taken into the final considerations, it is vital to feedback and explain why the decision was made the way it was, and how you view the opinions that were raised.

## Important factors

There are at least four important factors to consider when citizen dialogue is introduced to a governance system.

1. The first factor is values, principles or starting points for citizen dialogue. You need to agree on the reasons for having the dialogue, and the principles for how it is to be implemented. Developing a framework for citizen dialogue is the foundation of a systematic approach. It may also support the development of an internal culture with the citizens in focus.
2. The second important component is to have a clear system for citizen dialogue tied into the governance process. The system should clarify if and when the dialogue should take place in relation to the decision to be made. It is also important to consider whether the dialogue should be carried out in several stages of the decision-making process. Perhaps first when all you have is a blank piece of paper and only the basic facts are presented; then later for people to make up their minds about existing proposals; and finally a dialogue about the result and its consequences.
3. Only when the decision on the procedure for dialogue is made should you decide which tools in the dialogue tool box to use. There are many different methods for dialogue.
4. The last part is about feeding back the decision and the results that have come out of the dialogue. Here, too, the local authority needs several tools. It could be physical meetings, web presentations, in-house-produced communication materials and information via the media.

## Gains with a systematic approach to dialogue

The task for the elected representatives is to govern the authority based on the guidelines and the needs that exist within the organisation. To be able to govern as well as possible, they must be familiar with the values and needs that exist in the local community and be able to apply these in a wider context.

This implies the ability and the knowledge to shape and adapt the organisation, based on current laws and regulations, to the values and needs of the inhabitants.

For several years, the focus of citizen dialogue has been the development of a better working democracy. In recent years, however, there has been a growing recognition in both Sweden and abroad that a systematic approach to citizen dialogue also leads to efficiency gains.

Gains of citizen dialogue from a *democracy perspective*:

- More involvement increases the citizens' knowledge about the democratic processes.
- Research shows that participation in different contexts is inherently good, and strengthens the social capital in the community as well as the individual.
- Participation through citizen dialogue creates democratic legitimacy.
- Citizen dialogue early on in the decision-making process leads to an increased engagement and sense of responsibility among the citizens. Even if they do not get what they want, they have gained knowledge and understanding of the background to the decision which makes it easier to accept it.
- Human beings' constant need to be listened to and respected becomes a source of energy which may lead to curiosity and interest, which in turn may develop into a broader engagement in e.g. a political party.
- Different interest groups are given the opportunity to meet and solve problems together. The dialogue provides an arena where people can argue their views, but it is also a forum for listening to other people's opinions on the same issue. This may give an insight into the politicians' dilemma in dealing with different viewpoints that must be reconciled.

Gains from an *efficiency perspective*:

- Participation in citizen dialogue may increase the understanding of and facilitate the application of prioritised measures.
- Through dialogue, citizens may obtain a better understanding of the activities of the local authority. They may also obtain knowledge about the elected representatives' responsibilities for prioritisation of common resources.



- More systematic citizen dialogue may lead to better agreement between public service supply and the citizens' needs. The community's needs are always changing, and there is a risk that the local authority continues to offer services that few people, or nobody, require. Changing needs may be clarified through systematic dialogue.
- Increased participation gives stronger legitimacy to the decisions made by the elected representatives.
- Increased participation also means more transparency and knowledge about the conditions for local government. To participate, you have to be well informed not only of what the local authority is doing but also of the results of its activities. The citizen needs to be convinced that the resources used give the right service at the right cost and of the right quality.
- Increased transparency leads to better quality of public services. If the information about the results becomes more transparent and is openly presented to people and media, then the requirements on the internal development of quality are emphasized.

## Risks

Introducing citizen dialogue to the governance processes requires careful planning and preparation. Citizen dialogue is not something to be taken lightly. It requires logistics and the ability to be at once reactive, proactive and interactive to be really effective. Researchers point to a number of risks that need to be considered and addressed for the dialogue to be the effective tool that it is intended to be.

The biggest risk is that citizen dialogue leads to a more unequal democracy, where those who are already resourceful get another forum through which to influence decisions. It is not unusual for local and regional authorities to use forums and places where politicians and officers feel safe, such as public meetings in the council chambers. This limits the numbers and types of people who feel inclined to take part. Therefore, the elected representatives must actively seek out citizens where they are and where they gather, in order to obtain their views on the issue in question.

There is also a risk that citizen dialogue in the community deflects from party-political activities. Why should I choose to go through the political parties, if I can influence the local authority directly? It is important that citizen dialogue is a complement to representative democracy, not a replacement. By being clear about the principles for the dialogue, its purpose and framework, you can avoid it becoming a competitor to the political parties.

The parties' views on different issues may also be made clear in the dialogue context, through, for instance, presentations on the local authority webpage, or as written background material for the dialogue. A lack of overview of the bigger picture is another factor that researchers stress as a risk when working with citizen dialogue. The citizens engage in local issues and often lack either the interest in or the knowledge about the need to prioritise from a holistic point of view.

But you could also ask whether it is not important for people to engage in things that affect their everyday life. Depending on where you are in life, or where your particular skills and interests lie, it is only natural that you are impelled to get more involved in certain issues than other ones.

The responsibility to join up the bigger picture and make it visible rests with the politicians. It is worth remembering that many of our elected representatives started their political engagement through one particular issue and then went on to widen it to include the totality. Therefore, one must not look down on engagement in what is local and near.

### 3 examples

#### 1. PARTICIPATORY BUDGETING

Participatory budgeting involves using dialogue methods to involve citizens in the prioritisation of how public money should be used. It can mean giving citizens a say in the prioritisations of all or parts of the budget in question. The most common approach is to involve citizens in prioritising how parts of the investment budget should be used.

These prioritisations tend to be used as a basis for decisions then made by the elected committee members, but there are also examples where the citizens make the final decisions. In other words, the “participatory budgeting” concept is not one method but several.

The development of participatory budgeting started in Latin America in the late 1980s, in the municipality of Porte Alegre, Brazil. The background was that there was a need to involve citizens in prioritisations and to make the budgeting process more transparent in order to avoid and combat corruption. In the beginning, the citizens participated in the prioritisation of the investments, particularly concerning infrastructure. This involved deciding which areas should have access to waterpipes, sidewalks, streetlights, and so on.

In Porte Alegre, the administration worked actively to get people from various parts of the municipality to learn about each others' living conditions, and therefore bus journeys were arranged to take people to various parts of the city. The aim of this was to make people focus not only on the needs of their own area when discussing where efforts should be focused.

Porte Allegre has had great success in its work. The engagement has spread like rings on the water with more and more people participating in order to be able to influence the distribution of resources. Even when the governing majority shifted, the new majority decided to continue the work on participatory budgeting with very small changes. Today, participatory budgeting is used in many countries and on all continents.

The methods are used at both local and regional levels, in cities and in the countryside. A question one may ask is why participatory budgeting has had such an impact; from being a tool for countering corruption and giving poor citizens a voice on how to use tax money, to becoming a method used all over the world. One explanation could be that the World Bank in the mid- 1990s took an interest in this approach and made participatory budgeting a requirement for granting development resources. This meant that knowledge spread and methods were developed, leading to more experience. Additionally, it meant that participatory budgeting went from being a “leftish project” to becoming more focused on encouraging citizen involvement in local communities, without ideological overtones.

Take Peru as an example. There, municipalities are required by law to engage citizens in participatory budgets.

During the 1990s, the method spread to Europe, where the Bertelsmann Foundation in Germany, among others, carried out a number of pilot projects in order to further develop the model. The Carl Bertelsmann Prize, awarded by the Foundation, has as one of its criteria that the local authorities should involve its citizens in the budgeting process. Tavastehus, Finland, and Christchurch, New Zealand, were two municipalities which let its citizens have their say about budget priorities. Christchurch, which in 1993 was awarded “Best Run City in the World” (the Carl Bertelsmann Prize: Local Government), became a model for the development of participatory budgeting in Europe.

Participatory budgeting is now implemented in several European countries, including France, Spain, United Kingdom, Germany, Poland, Portugal, and Italy. In the UK a “White Paper” was adopted in 2008 which states that all local authorities should use participatory budgeting in some form by 2012. Evaluations of participatory budgeting in Europe show that the method is used mainly as a top-down approach. The background to its implementation differs from Latin America and is primarily focused on democratic development and improving public service efficiency. This is due to the European trend of declining voting turnouts, declining party memberships and a growing distrust in politicians and political institutions, in addition to the view that local and regional authorities are ineffective with regard to distributing public resources in accordance with their citizens’ needs.

There are both gains and risks when introducing participatory budgeting in local authorities. Social scientists point to a number of success factors, where the most important ones are that there is a political will and sincerity, that the process is continuous, that the ability to prioritise resources is given, and that there is feedback about how the citizens' priorities have been used in the decision-making process. The social scientists have also seen a number of risks/pitfalls that must be addressed, such as lobby groups gaining too much influence, participatory budgeting becoming a separate conduit, apart from the usual decision-making process, and that long decision-making processes lead to dissatisfaction.

Experience shows that certain criteria must be in place for the system to be credible. This includes for example a clear and agreed set of rules for how the participatory budget will be applied, that participatory budgeting becomes a part of the organisational system, and that feedback is provided not only once but throughout the whole process, from the meeting on priorities until the decision is implemented.

Experiences from municipalities and county councils in Europe that have practised participatory budgeting show that:

- People's engagement grows when they are given the opportunity to participate in the prioritisation of resources for the local community where they live.
- People move from protest-activities to a more constructive attitude to community prioritisations and decision-making once they have had the opportunity to participate in the prioritisation of resources.
- The citizens acquire more knowledge of the complex activities that municipalities and county councils are responsible for.
- Elected members gain insight in the citizens' needs, values and priorities with regard to what the local authority and authorities should do. In this way, the citizens' values may become an important part of the basis for decisions.
- Confidence and trust in the system and the governing/elected members grow.
- In Latin America, where participatory budgeting has been applied longer than anywhere else, the interest in joining political parties has grown.

## 2. CITIZENS PANELS

The development of citizen participation and engagement has become an ever more important matter for local authorities. Most local authorities have carried out dialogue activities with their citizens, but the knowledge that these activities have brought about has not been systematically used as a basis for decision making. Developing systems for citizen participation requires external methods, a topical issue and different target groups.

One method which has been trialled for a number of years is citizens' panels. Citizens' panels came into use in the late 1980s and reached a breakthrough in the early 1990s.

The method originated in USA where it was developed by Robert Putnam, a political science professor at Harvard University. Citizens' panels have been used in particular in the Anglo-Saxon world.

In Sweden, they started to be used at the end of the 1990s, but to a lesser extent. In the report by Kommundemokratikommittén (the Committee for Local Democracy) 2001:48, "Att vara med på riktigt" ("Real participation"), the panels are described as follows: "A citizens' panel refers to a group of local residents who are invited to be consulted and to discuss, together with politicians and experts, the municipal activities."

This means that the citizens are invited to physical meetings. From the outset, an important aspect was that the citizens' panel should be strictly representative, in order to reflect the constitution of the community. In the US, the UK, Australia and New Zealand, citizens' panels have been used to a great extent as a part of the work on modernising public services.

The citizens' panels were set up so that the participants were selected in a representative way and were invited to participate in a panel to respond to questions from the local or regional authority.

The panellists stayed on for a specific length of time, usually between one and two years. In order to avoid "professional opinion makers," the participants were continuously exchanged. A common way of working was to invite working groups to discuss a shared theme during one to two days, after which they would give advice to the politicians. Other methods that have been used include consultations, focus groups, surveys and "mystery shopping" (anonymous controls – through mystery shopping, the contractor can find out how internal routines and processes actually work.) The intention has been that the panel should be a group that the local authority can turn to regularly. Evaluations of citizens' panels have shown that it is difficult to achieve demographic representativity.

Keeping a panel representative is expensive and often requires external resources. It is also difficult to get people to participate in the physical meetings. In countries where this method is used it has therefore become more and more common to use e-panels and SMSpanels as an alternative to physical meetings. Local and regional authorities have also given up the requirement for representativity and instead simply invited those who want to take part. In order to engage as many as possible, a large number of communication activities have been used, from knocking on doors to advertisement campaigns. The citizens' panel is one of several citizen engagement methods. When a local authority has obtained the result of a question from the panel, they can check which groups have responded and which are not represented and then they make sure that they obtain the viewpoints of the latter in some other way.

The idea is that it should be the task of the local authority to guarantee representativity through the use of several different methods. Once the citizens' panel is transformed into an e-panel or an SMS-panel, the main aim is that it should be easy to participate – you should be able to take part at any time and place. To be able to take part without having to attend physical meetings can be attractive for people who cannot easily find the time to go to meetings but who are able to spend a few moments by the computer to give their opinions. Participants only need an email address or a mobile phone in order to take part.

People can also choose their level of involvement in the panel.

- The simplest level is to respond to a question sent via email or text message.
- The next level is an invitation via email or text message to participate in a consultation, focus group or similar, to discuss a particular issue.
- The highest level of participation is to take part, for an extended period of time, in a working group or advisory group on a particular issue.

### 3. E-PETITION

An e-petition is an idea, a call for action or a proposal put forward by a citizen to the local authority. The proposal is published on the council webpage, and other citizens can support it by signing it. The petition is perhaps one of the simplest democracy tools available today.

The idea is that an individual can submit a proposal and obtain support from other citizens. E-petitions give people a simple and easy-to-understand way of engaging in the development of the local community, and thereby to gain an understanding of the democratic processes. This gives all citizens the opportunity to engage with community issues between elections.

E-petitions do not change the role of the elected representatives, but rather provide them with better insights into and understandings of what engages the citizens. It is the simplicity of petitions that makes this tool particularly suited to be used via the internet. You can submit, support and follow proposals, as well as view the results online. Of course, petitions may also be conducted via mail or telephone, but the simplest and most cost-effective method, and the one which gives the largest number of people the opportunity to follow the process, is to use an online system.

If a local authority should choose to accept petitions also via mail and telephone, these should be entered into the online system so that they, too, are visible on the webpage. Introducing e-petition systems gives local authorities new ways of gaining insights into informal discussions and debates, for example in online social media, about public service issues.

E-petitions give local authorities an official channel for these debates through their own webpages. Through a political commitment it is also possible to bring e-petitions that receive strong public support into the political process. This provides the local council or health authority with the opportunity to address ideas and proposals through the formal structures and make visible the democratic process, which also includes prioritisations.

Initially, the e-petition tool was developed in the UK and the Commonwealth countries. These countries have a long tradition of petitions/proposals where citizens collect signatures for a proposal, which is then submitted to the decision makers. In the late 1990's, a modernisation program for public services was initiated in the UK. The aim was to promote people's trust in public services and to improve public service efficiency.

This involved a requirement to involve citizens in the development of local services. Several public authorities developed new methods for involving people, and some of these were ICT-based. In 2006, a special initiative to develop online participation methods was started. A number of pilot areas, including Kingston and Bristol, developed various methods; one of which was e-petitions.

The idea was to make the handling of petitions more transparent and to make it possible for new groups to submit initiatives to the local authority. Since then, e-petitions have spread to other countries in Europe and the rest of the world; including Sweden. The design of e-petitions and who is responsible for them differs between countries and organisations. The starting point has always been to create a system that is suited to the particular circumstances of the community in question.

A clear purpose is at the core of how an e-petition system is designed. Clarity of purpose helps manage citizens' expectations of what the system will do. Of course, the aims may vary, but in general the focus is on making more people participate in the development of the community in order to counteract a democratic deficit.

But this is not enough; the aim must also be to make the local services more effective and to raise quality by having citizens contribute their own knowledge and experiences of local public services.

From a citizens' perspective, an overarching purpose of the work could be described as the citizens gaining meaningful democratic experiences, where they feel that:

- They understand in advance what will happen and what advantages may be gained from participating.
- The local authority has followed through on what was promised.
- They may not have obtained exactly the results they wanted, but they understand why.
- They have had the opportunity to meet with other citizens and together develop proposals to influence the development of the community in which they live.

## How can the blockchain develop democracy and citizens participation?

Let us start by an introduction of the blockchain.

The blockchain is a technologically advanced data process, which stands out in such a way that it is difficult to understand without lengthy technical reasoning.

The blockchain is based on something called "Distributed Ledger Technology (DLT)" and was first presented in 1982 by cryptographer David Chaum at the University of California in Berkeley, USA.

Unlike traditional databases, blockchains do not record data using a central control function that users must trust, such as a bank. Data is instead recorded in a decentralized and distributed manner.

This means that data is recorded simultaneously on all servers across an entire network following an algorithmic process between the servers, which jointly agree to update the database. This consensus process leads to data validation if certain formal requirements are met. Valid transaction data is irreversibly recorded in a block that is chained to other blocks through encryption.

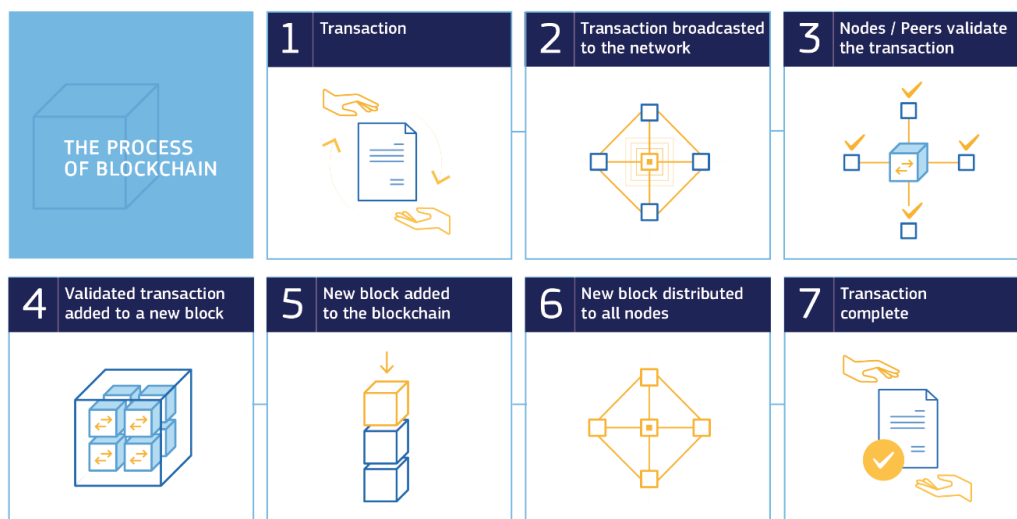
The EU Commission has the following definition of the term:

*"Blockchain is the best-known distributed ledger technology. A ledger is a database which keeps a final and definitive record of transactions.*

*Records, once stored, cannot be tampered with without leaving behind a clear track. Blockchain enables a ledger to be held in a network across a series of nodes, which avoids one centralized location and the need for intermediaries' services. This is particularly helpful for providing trust, traceability and security in systems that exchange data or assets. There is a lot of potential for blockchain to be used in many different areas such as financial services, supply chains or healthcare."*



In the report "European Commission's blockchain strategy", from 2021, the process is described graphically as follows:



In the report, the EU Commission states that *"Blockchain technology allows people and organizations who may not know or trust each other to collectively agree on and permanently record information without a third-party authority. By creating trust in data in ways that were not possible before, blockchain has the potential to revolutionize how we share information and carry out transactions online"*.

We at the County Administrative Board of Skåne often try to explain what the block chain is through a comparison.

If we write a document, in for example Word, and send it to a friend, the friend can copy the content and make it his own by adding or subtracting and then send the document on.

If you instead send the content, text or image, in a block chain, it has a unique signature and cannot be copied or made your own. If someone wants to add to your text or image, it becomes a new block in the chain with the sender's unique digital imprint.

If you try to summarize the concept, you can say that the blockchain is a data structure that saves and tracks data transactions in a secure and decentralized way, without any individual person or organization owning and controlling the system.

Among other things, the technology can be used for:

- financial services such as securities transactions and insurance
- digital identities
- traceability in distribution chains for, for example, the origin of raw materials
- digital currencies
- referendums and elections
- create sustainability through platforms for, for example, green electricity distribution

In the public sector, blockchain technology can primarily be used for various types of applications, consultations, votes or as a suggestion box.

## Public sector use of the blockchain

Within the framework of the BLING project, we at the County Administrative Board of Skåne, together with the company SWECO, in 2020 carried out an international analysis of the blockchain as an instrument for democratic development.<sup>3</sup>

Here we could note that the blockchain is used quite sparingly in the public sector; this was generally true worldwide. However, we could see a clear upward trend over time when it came to the degree of use of the blockchain in the public sector; the number of blockchain projects in the public sector is continuously increasing over time.

We were able to ascertain that the public blockchain projects were found in the following subject areas:

- Title/asset registrations: including land or business registry
- Educational certification and credentials
- Healthcare: including data for research or patient ownership of data and records. Given the sensitive nature of the data and problems with sharing data in multi-provider systems. Blockchain also offers a clear audit trail and ownership
- Government funding: increasing accountability in aid spend or increased transparency in government expenditure
- Supply chain traceability and tracing: ensuring food safety or traceability of goods, as well as tracking volume of trade in goods

---

<sup>3</sup> Länsstyrelsen Skåne och SWECO, "Blockchain – obstacles and opportunities for democracy development", Malmö, 2020.

- Taxation and excise: combating VAT fraud, streamlining VAT systems and how tax is calculated and collected
- Democracy and dialogue: for instance, e-voting or the introduction of liquid democracy systems and improved
- Identity: perhaps the widest use case for blockchain in government is that of digital identity.

Estonia, with its clear "e-government" profile, is the country in the world that stands out when it comes to the use of block chain technology in the public sector.

Estonia was the first country to use the blockchain at the national level. As early as 2012, 90% of the country's population had acquired a so-called "e-id", which functions as a digital ID card and provides the holder with many different services.

E-idt provides access to financial services, care and emergency assistance, e-voting, and digital signatures. The digital ID cards are encrypted and based on the block chain, which has meant that neither hackers, system administrators nor the state can manipulate.

## Why isn't the blockchain used more in the public sector?

How is it then that a technology with such a large and broad positive potential as the blockchain de facto has, can have such difficulty gaining an impact in practical use in the public sector?

Tentatively, we see three explanations for this:

1. The blockchain is a complicated technical structure that is difficult to explain and make understandable, and therefore difficult to gain acceptance for.
2. The blockchain is too intimately associated with cryptocurrencies such as bitcoin and thus with the so-called "dark net".
3. The blockchain is decentralized in its structure; that no single organization or individual can rule over a blockchain is its greatest advantage. However, this contrasts with the fact that the public sector is usually clearly centralized. Here a discrepancy arises in the fact that the centralized authority or municipality has difficulty applying a decentralized technology solution.

Here, educationally innovative approaches are therefore required in order to generally increase knowledge of the blockchain's many positive opportunities within the public sector.

## The blockchain as part of public sector digitization in Sweden

The Covid-19 pandemic has very significantly increased the speed of digitization in Sweden, and not least within authorities, regions and municipalities.

In a short time, the public administration has undergone a very large change in its working methods where digital support, work and meetings are used outside of traditional office environments and with large elements of innovation and new technology. This rapid development, forced by the pandemic, has shown even more the need to strengthen and maintain citizens' trust in the digital world.

Citizens' trust is central when we discuss digitization, and here there are several factors that can act as a limitation when it comes to a faster rate of digitization and automation.

One factor is that law does not develop in step with technology; the technological development is much faster than the legislation has time to value and regulate.

Another fact is that there is a lack of human resources and competence in the public sector when it comes to digitization.

Furthermore, digitization is not an issue that is high on the political agenda; which also reduces the speed of development.

Research at Malmö University shows that the blockchain is a technical solution that must be considered to have great potential in many different areas for the public sector.<sup>4</sup> However, it has been used relatively sparingly in Sweden until now.

This is also confirmed in a report from 2020 from the Swedish Agency for Digital Government (DIGG), where the government is recommended to immediately give DIGG the task of developing, scaling up and establishing models for increased digitization in Sweden and the EU, and where AI and the blockchain are highlighted as particularly interesting solutions.<sup>5</sup>

In 2016, the Swedish Land Survey was commissioned by the Government to investigate the possibilities of using blockchains for property transfers and mortgage registrations.

It is, until today, the only major blockchain project carried out by a Swedish authority.

---

<sup>4</sup> Filip Janjic och Gentrit Hasanaj, Malmö Universitet, "Blockchain som resurs inom offentlig sektor", Malmö, 2019.

<sup>5</sup> Myndigheten för Digital Förvaltning (DIGG), "Testa ny teknik för automatisering inom offentlig förvaltning", Sundsvall, 2020.

In order to get an overall picture of whether, and if so how, the 290 municipalities in Sweden use the blockchain today, the County Administrative Board of Skåne, within the framework of the EU project BLING, conducted a small survey in autumn 2021.

Our starting hypothesis was that the municipalities do not use the blockchain today.

This hypothesis was indeed resoundingly confirmed.

Of Sweden's 290 municipalities, 115 answered the survey (39.6%); which, given the complexity of the issue, was significantly more than we expected. The survey was answered anonymously.

From the answers to the survey, we could draw the following conclusions:

- ✓ Today, the blockchain is used quite sparingly in the public sector; this generally applies worldwide.
- ✓ The trend is clearly upward over time regarding the degree of use of the blockchain in the public sector; the number of blockchain projects in the public sector is continuously increasing over time.
- ✓ Sweden's municipalities have started to think about how they can use blockchain technology; however, to a rather limited extent.
- ✓ Research shows that the blockchain is a technology that can have a major positive impact on the work of the public administration.
- ✓ Pedagogically innovative approaches are required to generally increase knowledge of the blockchain's many positive opportunities within the public sector.

## Democracy and digitalisation

Society's digital transformation affects us all in many different ways, and also our democracy. Democracy is not static but must develop to meet its contemporaries and developments. In order to strengthen democracy and society, research, innovation and development are important dimensions.

Democracy is constantly changing and developing. Digitization is one of the strongest driving forces for change in our time, and it creates opportunities as well as challenges for democracy. Digitization can create better conditions for people to meet, meet, make decisions and develop the tools, methods, processes and function of democracy.

But at the same time, democracy can be threatened by digitalisation. Disinformation, online hate, digital divides and cyber threats are examples of threats to democracy.

The major democratic challenges with digitization are not understanding what it is, but what it means for us as citizens. We talk a lot about learning new technology and how it helps us become more efficient, both at work and at school. We know quite a lot about this today.

The challenges are being able to see and understand the effects of digitalisation. How digitization brings about new power relations in society and new actors who determine what media flows look like and how information flows between people.

Digitization began with widespread optimism about the Internet's possibilities, not least as a democratic force. Today, more and more problems are being discovered.

A constant fight for an open, free and safe internet is going on all over the world – against surveillance, control and censorship. Close to half of the world's population still lacks access to the internet, while malicious and targeted cyber attacks are becoming increasingly common.

Citizens' digital competence should ultimately be understood and treated as a matter of equality and democracy, because lack of knowledge and ability to participate in digital development risks upsetting trust in social institutions.

The school has a very important role when it comes to digital democracy.

In the Swedish National Agency for Education's commentary material to the curricula for primary school level and upper secondary level, the digital competence in the governing documents is interpreted based on the following components:

- Be able to understand how digitization affects society and the individual.
- Be able to use and understand digital tools and media.
- Have a critical and responsible approach to digital technology.
- Be able to solve problems and put ideas into action in a creative way with digital technology.

A survey conducted by the European Commission in 43 education systems during the period 2018–2019 shows that teachers' digital competence and teachers' perceptions of the added value of digital technology in teaching and in students' learning processes play a decisive role in the successful use of digital technologies in school.

Just over half a million adult Swedes do not use the internet today, according to the latest report "Swedes and the Internet" from the Internet Foundation. Age is the most common factor in not using the internet. Income, education, place of residence, ethnic background and functional variations also affect the use of the internet and digital competence. But there are far more people who at some point feel that they cannot cope with digital services, or are comfortable with and understand information and news flows.

Socio-economic factors also contribute to the fact that digital skills among the population and access to the necessary technology vary greatly. Some citizens are completely left out.

Research at Linköping University shows that increased digital participation contributes to building a sustainable society. Digital services and information channels are important to contribute to the global sustainability goals, such as good health and well-being, good education for all and reduced inequality. These goals can only be fully achieved if more people in society are included in the digital world.

## How can the blockchain strengthen democracy?

The blockchain's most important component in building democracy is that it creates trust. With the blockchain, trust can be built into the system, as there is no single actor in control. Instead, it is distributed across all nodes. Any user who wants to can thus control the system.

In concrete terms, we see great potential in the blockchain as an instrument for various types of referendums and elections. The citizen casts their vote and sees it stored in the block on the blockchain, transparent to anyone who can read code. The voice itself is stored but the identity is not saved. It's just ticked off.

By using blockchains, one can create a system for electronic voting that makes it possible to vote from anywhere. All eligible people would be registered as users of the blockchain and each user would be assigned a vote. The users would have access to their voice via a user interface that would be accessible via an electronic device with an internet connection.

Each user would have their own password that would give access to the secret key, which is used when the voice is recorded. All votes would be saved in the blockchain in the same way as transactions. Each vote would be verified by other users before the vote becomes valid. According to the same principle as with cryptocurrencies, each vote can be verified by other users via public keys.

Blockchain's decentralized structure has also contributed to concepts that seek to make democracy more efficient.

For example Liquid Democracy, The system works by assigning each user a vote and the user can vote for anyone who is on the same blockchain. The votes can also be moved at any time, there by the name Liquid Democracy. This system of voting can be used in many different areas beyond political elections. Problems with the system include stability.

Our conclusion is that the blockchain can definitely be used to develop democracy.

The area where we believe the blockchain may have the greatest opportunity to establish itself as a tool for citizen dialogue and democracy is e-voting.

## What is electronic voting?

Electronic voting is an umbrella term for digital voting that can be somewhat simplified into two types.

The first type means that voting takes place using an electronic physical machine in a controlled environment and the second type means that voting takes place via the internet in uncontrolled environments, also called internet voting or i-voting.

Since the beginning of the 21st century, many countries have discussed the introduction of electronic voting over the Internet as a supplement to general elections.

The discussion can be briefly summarized as a trade-off between a simpler and less costly way to exercise democratic rights, and on the other hand a system with major IT risks, which could endanger the legitimacy of the election results.

Of the basic principles of the electoral system, elections that allow internet voting can guarantee universal and equal voting rights as there are various technical authentication solutions that can arrange this.

However, it is more difficult to guarantee that elections where voting takes place over the internet are free and secret. When voting takes place over the Internet in uncontrolled environments, it is largely the individual himself who is responsible for maintaining the free choice and the secrecy of the election.

## Experience of internet voting in general elections

Currently, only a few of the world's countries have tested or use some form of i-voting in general elections.

So far, only Estonia has chosen to apply internet voting in uncontrolled environments for all voters in general elections.

France applies internet voting as an option for expatriates, while Switzerland applies this in some regions.

In Sweden, a parliamentary committee was appointed in 2011 with the task of reviewing parts of the electoral system. The committee presented its final report in 2013, which proposed trials of internet voting.

The government chose not to proceed with the proposal as it considered the risks to be greater than the gains; especially given that voter turnout is already considered high in Sweden.



Overall, the interest in internet voting seems relatively weak in Sweden.

In March 2020, a new parliamentary committee was appointed, this time tasked with reviewing and considering changes to parts of the electoral system to strengthen protection against manipulation of the electoral system.

The government chose to proceed with proposals that the committee came up with. In October 2021, the government's bill was presented, which contained various proposals for changes to the electoral law to strengthen the protection of voters at the reception of votes and the secrecy of elections.

This bill, in combination with the fact that there was a recent investigation into the introduction of electronic voting which was closed, can be interpreted to mean that internet voting is not something that will be introduced in general elections in Sweden in the near future. This conclusion was confirmed by the Swedish Electoral Authority.

Although internet voting is not yet considered secure enough to be implemented in general elections in most countries, there is a wide range of uses for the technology in other forms of elections and polls.

So far, it is mainly various trade unions, NGO:s, political organizations and companies that have used the technology. The votes have ranged from:

- adding positions
- determining the location of lists on ballot papers
- elections to company boards
- general meetings
- decisions within member organisations

During the Covid pandemic, the Swedish government introduced a law that made it possible for physical presence not to be a requirement at company and association meetings. This has meant that interest in technical solutions that offer internet voting has become more popular.

## Can blockchain technology enable electronic voting to become more secure?

Blockchain technology has been proposed as a technical solution that has the potential to provide secure electronic voting while preserving the secrecy of the vote.

This is still a relatively unexplored area and there are thus only a few examples where blockchain technology has been used to enable electronic voting.

In 2018, the US state of West Virginia began using the technology, and in 2019, Colorado and Utah also chose to join to enable active military personnel and their families to be able to vote in connection with various municipal elections.

Proponents say the test projects in the three states were successful and use of the technology can be scaled up, while critics argue that blockchain technology is still not secure enough.

The problem of guaranteeing freedom of choice remains and must be ensured in other ways.

## The BLING project and digital voting via the blockchain

Within the framework of the BLING project, the County Administrative Board of Skåne has the ambition to develop a model for digital voting using the blockchain.

When we started work on the BLING project, we assumed that there were already developed solutions for elections and polls using the blockchain available in open-source; models that we could just "pick off the shelf" and use. It turned out to be wrong; there wasn't.

After detailed and careful analysis, we can state that today there is no blockchain solution that meets the requirements. We therefore have to develop our own model.

We have studied roughly 250 different projects around the world where the blockchain has been used by various authorities for polls, among other things.

Unfortunately, we are forced to state that none of these projects are directly applicable to our needs within BLING. The main reasons for this are that they are either not based on open-source or that they are located on servers located outside the EU, which the GDPR legislation does not allow.

The project that was carried out in Zug in Switzerland some year ago is the example that is most reminiscent of what we to carry out within the framework of BLING.

If we, within the BLING project, can develop a working blockchain solution for elections and polls, this would be of great interest and value to actors in the public sector nationally and internationally.