

Exploring Quadratic Voting as a Tool for Deliberation and Decision Making in the Be-Commoning Process

Research Project



Charging the Commons

Urban commons (noun) Resources in the city which are managed by the users in a nonprofit and prosocial way.

Urban Commons can include any number of resource types, from housing to Wi-Fi, but the main thing that makes urban commons different from public goods and consumer goods is that they are managed by the users through a prosocial, participatory process called commoning. (Dellenbaugh-Losse, Zimmermann & De Vries, The Urban Commons Cookbook).

Be-commoning *(verb)* The process through which a new (urban) commons is established.

Whether a Wi-Fi network or a housing cooperative, before people can start using and managing a collective resource, it needs to be conceived, set up and put in place. This is a complex process that includes the design of the resource itself, its governance structure and rules of engagement, the building or strengthening of a community of commoners that will collaboratively manage the resource, and often also negotiations with external actors such as local governments, financial institutions or future neighbours.

Terms

The past two decades have seen a resurgence in interest in the (urban) commons. Examples include initiatives such as energy cooperatives, neighbourhood gardens, local transportation schemes (e.g. car-sharing), collective housing, open-source software, community-run libraries, and organizations managing care for neighbours.

These commons – sometimes called resource communities – are presented as collective modes of economic and social organization that could function as alternatives or complements to the market and the state. Their goal is not profit or mere efficiency. Rather they aim to contribute to the collective well-being of the community, strengthen social relations, and give members collective ownership and sovereignty over their resources. They also aim for the prolonged sustainability of local and global social-natural ecosystems, contributing to a more just, socially inclusive, and sustainable society.

Managing these commons is complex and they do not manifest out of thin air. Before they are up and running, many things must be put in place. A community of prospective members needs to come together to discuss their motives and values. These need to be translated into the architecture of the resource (e.g. a shared apartment building) and a formal governance structure, including rules about members' rights and duties. In turn, these need to comply with (local) regulations and be integrated into existing social and economic contexts.

We have coined the term be-commoning for this process: the various tasks that must be thought through and carried out to develop a new commons. This process often involves professionals with expertise in law, architecture, construction, finance, and technology. It also requires skills in project management and orchestration to guide a community through the various steps needed for them to become a commons.

An important part of be-commoning is the process of value articulation and the making of various decisions about the structure of the commons, including its physical appearance, rules of engagement and governance structure. In our research project Charging the Commons we explored tools that commons professionals and communities could use in this process. We took a situated design approach, and worked in collaboration with the House of Hope housing cooperative, in the Amsterdam Bijlmer-neighbourhood. Here, we observed that the tools and procedures used to make decisions during be-commoning at times fell short, and failed to accommodate the complexity of an issue, and/ or include the diversity of opinions connected to it. The communities and commons professionals we interviewed also expressed a desire for means of decision-making that can help streamline deliberation during lengthy decisionmaking processes, and more righteously and harmoniously achieve a collective common good.

This led us to investigate if/how a decision-making method called Quadratic Voting¹ (QV) could be of affordance to a budding commons. We designed a new QV-prototype and piloted it during a workshop with House of Hope, who are in the process of be-commoning. In the following report, we will share the insights gained from this workshop, reflect on them and draw conclusions on the use of QV in the context of be-commoning.



Our quadratic voting web tool can be found on

https://quadratic-commons.org



Our quadratic voting prototype is open source available on GitHub

https://github.com/WesWeCan/ quadratic-commons

About be-commoning and decision-making

- → Be-commoning is a complex process during which communities need to come together and find ways to express the core values underlying their future collaboration.
- → At a certain point, these values need to be translated into concrete design requirements, e.g. the wish for the inclusion of particular types of collective spaces in a housing cooperative.
- → This decision-making process should be understood as a lengthy, often messy, non-linear affair. Communities deliberate intensely about what exactly to share, and how to organize sharing.
- → Traditional deliberation & decision making tools and procedures often fail to accommodate the complexity of an issue, or include the diversity of opinions connected to it.

About Quadratic Voting, and its affordances for be-commoning

- → Quadratic Voting (QV) can be used as an alternative method to guide deliberation and come to decisions. QV is devised to nudge voters toward compromise, and can also mitigate possible factional control problems.
- → In Quadratic Voting, participants receive a number of credits that can be exchanged for votes. These votes can be spent in favor of or in opposition to issues on the ballot. The first vote for each issue costs 1 credit, the second 4 credits, a third costs 9 credits, etc. This allows participants to cast extra votes for issues they particularly care about, but this will be increasingly

costly, and diminish their ability to exert influence on other issues on the ballot. In this way, the QV method nudges voters toward compromise.

→ Situated experiments with QV are still scarce and many existing interfaces are too complex for use with novice communities, and/or fail to give an intuitive overview of the allocation of votes, and/or point to specific voting outcomes. To address this, we have designed our own QV tool, available at https://quadratic-commons.org

Insights gained from our experiment

- → Using QV, issues need to be 'ballotized': they need to be articulated as voteable issues community members can vote in favor of (or oppose). Ballotizing issues can galvanize previously informal and long-winded discussions. We noticed that participants assumed a more serious decision-making posture when encountering a formally prepared ballot.
- → A QV voting round results in not only a ranking of the 'winning' issues (most positive net votes), it also produces granular data. E.g. it reveals whether an issue is polarizing, receiving high numbers of positive and negative votes. Or because a small number of community members spend a high number of votes on one issue- indicating a minority with a very strong preference.
- → Depending on these kinds of outcomes, the group can choose different courses of action. If an issue is controversial, perhaps more deliberation is needed before a final decision can be made.
- → Ballotizing issues, interpreting the results, guiding further discussions and deciding whether a final decision can be made may be complex tasks.
 Commons professionals can help orchestrate this process.
- → Commons-professionals see potential in the use of QV in the be-commoning process. More research and experiments can contribute to the further development of tools and procedures to implement QV.

Be-commoning in Amsterdam Bijlmer



The Community Land Trust H-Buurt and its first housing cooperative House of Hope House of Hope is the first housing cooperative being realized by the Community Land Trust H-buurt¹. The Community Land Trust (CLT) model is a way to build long-term affordable housing and ward off real estate speculation, to ensure affordable housing and neighbourhood facilities in perpetuity by taking them off the market.

This is of special concern in the Amsterdam Bijlmer, where the CLT H-buurt is based. Housing prices in the Bijlmer are spiking due to gentrification, in combination with the ongoing housing crisis affecting the whole of Amsterdam. House of Hope residents will design and co-own a sustainable cooperative apartment building– also known as a 'wooncoop' (a Dutch abbreviation for housing cooperative.) The plot of land upon which it may be built is leased under favorable conditions from the municipality, contributing to a lower monthly rent. In the building there will be apartments for rent and for sale, for about fifty local residents. If a renter moves out, the CLT selects a new CLT-member to rent the apartment to. Apartments can only be sold for a capped price, and the original owner is returned their initial investment plus part of the apartment's added value. In this way, housing remains affordable for local residents– generation after generation.

Supporting this endeavor are a number of commons professionals, most notably And The People, and Common City Development. And The People² is a social innovation bureau specialized in regenerative transitions. Common City Development³, a group of project developers and architects, guides self-build collectives throughout the process of realizing their own sustainable and social living environments. Both organizations are deeply involved in clearing the administrative hurdles on the way to securing a building plot for House of Hope, and drafting a design for the apartment building together with wooncoop members.

There were two pressing topics at the wooncoop meetings we attended, about which prospective residents needed to come to a decision: determining the allocation of apartments and membership procedures (who may actually live in the house and based on which criteria), and the spatial design of the apartment building. There were discussions and group sessions planned to figure out which spaces for proposed shared facilities/activities should be included and/or prioritized.

https://www.andthepeople.org
https://www.commoncity.nl

Alternative means of decision-making for the commons

During those meetings, we observed how the wooncoop was experimenting with different ways of making these decisions, including online polling tools like Mentimeter⁴ and traditional majority (show of hands) voting. We also started to note that these tools at times fell short, and failed to accommodate the full complexity of an issue, or include the variety of opinions connected to it.



In this context, it's important to understand decision-making as a lengthy, often messy, non-linear affair. When thinking about decision-making the tendency is to grab onto the tail end- the binding decision that has been made. But especially during be-commoning, communities deliberate intensely about what exactly to share, and how to organize sharing. Deliberation is an integral, necessary, and valuable part of decision-making, and the corresponding iterative process of value articulation that is a central aspect of the be-commoning process.

We thus observed a desire for decision-making tools that could help organize decision-making processes, and for methods that were designed to be more righteous and inclusive- in the sense that they produced an outcome that reflected what was in the interest of the wooncoop as a whole. Exploring emerging means of decision-making geared for a common good is an understandable move for these communities, as an integral part of the becommoming (and commoning) process is melding individual agendas with those of the group, to achieve compromise.

In our broader situated research, we observed different non-traditional means of decision-making and governance. These included Holacracy (at De Warren⁵) and Deep Democracy (at Schoonschip⁶), generative methods that are not simply designed to quickly produce a singular outcome. We also noticed a general uneasiness with traditional A/B voting, as it did not satisfactorily include the diverse and nuanced opinions of members. Particular issues might affect certain members or their situation disproportionately. For instance, deciding whether or not to include space for child-care in a cooperative building. We observed how the unnuanced results of A/B votes still led to additional rounds of deliberation– instead of producing the anticipated binding decision, thus undermining the method. Re-opening democratically decided upon issues elicited mistrust in the decision-making process. With this in mind, the progressive communities we worked with were open to trying-out emerging process-based methods.

Considering these factors, our own research-design team was keen to investigate how a multidimensional decision-making procedure called Quadratic Voting could be of affordance during be-commoning, and to try-out this method out with the House of Hope wooncoop.

Quadratic voting as a method for collective decision making

From a design perspective, we were interested in how a quadratic voting tool could address some of the concerns described above, and if it could give shape to a different kind of decision-making process. One reason we chose QV is because the method is (mathematically) devised to nudge voters toward compromise. Additionally, QV has been proven to work well in groups that share a clearly defined common good (in our case, affordable housing for local residents.) QV can also mitigate possible factional control problems, also known as 'the tyranny of the majority.' Finally, digital interfaces for QV could be used for decentralized voting, which could be convenient during be-commoning as many decisions need to be made and not everyone has the time to continually meet in person.

Alongside the features described above, each quadratic voting round produces a menu of granular data reflecting how both individuals and the group stand in relation to the issues being voted on.

The QV method works best when a defined group must prioritize a finite resource. It has been almost exclusively tested in cases of budget prioritization (also known as Quadratic Funding.) In the context of be-commoning, we were interested in how the multidimensional data resulting from a QV voting round could be applied to, and recirculated into, the broader decision-making process.

Before a voting round, credits are administered to each individual. Individual voters may then allocate these credits to various ballot issues to express the intensity of their conviction per issue. A number of credits can be spent in favor of or opposed to each ballot issue. These credits are then exchanged for votes according to their square root. This means if you put 1 credit on an issue it equals one vote, 4 credits are two votes, 9 credits are three votes, and so on.

For instance, if a certain issue is very important to you, you can spend more credits on it, thus resulting in more votes for that issue. If an issue is less important to you, spending less credits results in less votes for that particular issue. In this way, votes are cast per issue by degree (more/less in favor of or

more/less opposed to) an issue. This allows participants to cast extra votes for issues they particularly care about, but this will be increasingly costly, and diminish their ability to exert influence on other issues on the ballot. In this way, the QV method nudges voters toward compromise, as spreading votes across more issues results in more overall influence.

Once all voting ballots are submitted, each individual ballot is combined with the others to produce the collective voting results. While an individual's ballot reflects their 'temperature' on all of the different ballot issues, all ballots combined reflect the collective 'temperature' on all the different ballot issues.

The results show which issues are broadly supported or still contested, either by individuals or factions within the group. By analyzing this data, the voting results can be used to guide the next steps to be taken– for instance finalizing a non-contested issue, or flagging a divisive issue for further deliberation.

Voting by degree on multiple ballot issues generates a spectrum of granular data, not only per issue – but comparatively, and even how individual responses weigh up to collective results. To figure out the ways in which this data can be interpreted for the benefit of be-commoning communities, and into a resource for commons professionals, we set out to design our own QV prototype and test it in-situ with the wooncoop.



→ Screenshot from our QV web tool.

Experimenting with QV at the House of Hope wooncoop

Arriving at the questions & credits

During previous interviews and workshops, the wooncoop articulated that the design of their apartment building should be organized around the notion of care, and the different ways they intended to share care– for each other, and the surrounding neighbourhood. For instance, by including space for shared child care, tending to green spaces around the building, or by incorporating auxiliary social facilities for the neighbourhood on the ground floor. While earlier discussions contributed many ideas about how to translate these different types of care into an actual blueprint, both wooncoop members and the project architect needed to make more concrete decisions to move forward.

This was the point of departure for our quadratic voting workshop, which included fourteen participants from the wooncoop, and ten issues about the design of their apartment building. Because the overall size of the building had been determined, we worked with a finite resource: space (or square meters).



We chose ten issues for this experiment based on which issues arose most frequently during previous meetings, design sessions and interviews with wooncoop members. In addition to those mentioned above, other issues included voting on sharing a central kitchen, invoking an open door policy, and including spaces specially designed to facilitate (intergenerational) companionship and kinship.



Each participant was issued 99 credits, which they could allocate to issues on the ballot, to signal the intensity of their conviction per issue. Other QV experiments indicated that voters are more likely to spread their votes if they receive 99 credits instead of an even 100. (The number 100 intuitively introduces the possibility of throwing all credits onto just one issue, thus watering down an individual's overall voting influence, thus resulting in less compromise). We were surprised to learn from researchers at RadicalxChange⁷ (pioneers in QV) that there is no 'golden formula' for determining the ratio between the number of credits a voter receives and the number of issues on the ballot. Nevertheless, 99 credits to allocate to ten ballot issues seemed to make sense for our experiment.

Designing the tool

Having tested all the open-source QV interfaces we could find with our Charging the Commons team of researchers and designers, we concluded these were too complex for novice users. They also failed to give an intuitive overview of the issues, credit to vote exchange, and results. This meant we needed to design a more accessible and user-friendly tool for our workshop. Below, we discuss some key technical points and design considerations for the prototype we designed to conduct our experiments with the House of Hope wooncoop.

When setting up a new ballot, the host is able to input and sequence issues, and determine the number of credits each voter receives. Each voter is sent a sign-in link for the voting round, and can choose to remain anonymous or share their identity with the group. Voting can be decentralized, if need be.

The main screen includes a numbered overview of all ballot issues, a creditto-vote legend indicating the (quadratic) cost of each vote, and a real time overview of how the user is voting. Voters can allocate credits from their pool of (in our case) 99 credits over all the issues– either in favor or opposed. Credits can be reallocated if the voter changes their mind, or reset in their totality. The credits have been conceptualized as opaque tokens, as tokens are a familiar form of spending. This design was loosely based on an interactive article in the Economist⁸.





When a ballot is submitted, the voter is linked to the results page which includes an overview of their voting results juxtaposed with the overall group results.



 \mapsto Results page of our QV web tool.

Here, the individual/community – and/or a commons professional can delve deeper into the analytics. For instance, you can see if a particular issue was hotly contested, or did or did not receive a lot of traction. To help make more sense of these layers of analytical information we used 'badges' to indicate, for instance, which issues received the most attention (as this might not be the number one ranked issue) and when an issue is polarizing. Pointing to these outcomes can help communities transition into focused rounds of deliberation. We'll look more closely at how later in this article.

While more experiment in-situ and in cooperation with commons professionals is needed to further iterate our prototype, we've managed to create an interface that can behave like a radar, or a digital divining rod that detects and points to frictions. It flags these instances, to help the community make decisions, about which issues can be harmoniously taken up, and which ones merit additional rounds of deliberation.

Workshop outcomes

Our workshop resulted in observations that suggest how our QV prototype can aid be-commoning by galvanizing discussions, detecting friction and creating harmony.

Galvanizing discussions

Be-commoning is characterized by many group discussions. On the one hand, these discussions help to define and articulate shared values, and to weigh up individual preferences and priorities versus collective ones. On the other hand, getting bogged down in discussions can thwart progress during an already particularly laborious process.

Ballotizing decisions – literally making them vote-able – can spur becommoning along by concretizing pertinent issues. During the workshop, we noticed that members assumed a more serious decision-making posture when encountering a formally prepared ballot. Ballotizing issues galvanized previously informal and long-winded discussions. Additionally, deliberation points– and counterpoints, and even questions in regard to ballot issues were formulated with more consideration. These tended to be more compelling than what we had observed during previous meetings about the design of the apartment building.





Here, we envision a role for commons professionals to elucidate which issues are ripe to put to ballot– and just as importantly, to ensure each issue is understood in the same way by all participants. This is easier said than done, as the way an issue is formulated can trigger different interpretations by different participants. Developing a 'common language' or 'community vocabulary' can be an important preliminary step to preparing to ballotize issues.

Detecting friction

For our workshop, we chose a communal (as opposed to decentralized) setting, in which members could openly ask questions and partake in a discussion about the results directly following the voting round.

A QV voting round results in not only a ranking of the 'winning' issues (most in favor votes), but also an assemblage of granular data per each ballot issue. This is because votes can be cast by degree: more/less in favor of or more/less opposed to each issue. The degree to which each voter is more in favor of or opposed to each issue is reflected in the collective voting result. This means each voting round produces a spectrum of data that can be comparatively analyzed and sorted. For instance, we can see which issues on the ballot at the wooncoop attracted the most attention (most net votes), and which issues were polarizing.

The data also shows which issues garnered attention and no opposition, the socalled 'no-brainers.' Depending on these different kinds of outcomes, the group can choose different courses of action. For instance, a clearly polarizing issue can be put up for more deliberation, while a 'no brainer' could be immediately taken up. The ground floor of the building should be shared with the immediate surrounding community.

Voting outcome: 0 (Total credits spent on this issue: 68)

Number of voters: **11** Votes in favor: **13** | Votes opposed: **-13** (Gross votes: **26**)

During our workshop, the most polarizing issue was by far opening up the ground floor of the wooncoop to the surrounding neighbourhood. Opinions were split down the middle, with half of the total votes in favor and half opposed. This led to pointed deliberation about this particular issue, and the wooncoop was clearly not yet ready to decide. Space for collective child care attracted the most attention, the most votes in favor of, and no opposing votes. This clearly pointed to the supreme importance of this issue for the wooncoop. It was imperatively taken up to be communicated to the project architect.



Our prototype utilizes 'badges' to tag different outcomes, like the ones described above. In this way, our QV tool can work like a radar, by detecting levels of friction in the voting outcomes and tagging these on the results page. In the case of our workshop, there was much commonality in regard to almost all ballot issues, and one clear instance of polarization. By flagging different levels of friction our tool helped to whittle down the ballot, by revealing which issues merit more deliberation, and which ones the group could harmoniously decide upon.

Creating harmony

Our prototype is designed to display individual voting results, alongside the collective results. Remarkably, wooncoop members chose to exclusively view the collective voting result. In interviews, they pointed out that viewing the collective voting result, as opposed to scrutinizing individual responses, felt more harmonious. This also allowed for open deliberation and reflection directly following the voting round, without ostracizing specific individuals. (As one member pointed out, no 'finger pointing.') This approach spoke to a tenet of the wooncoop: prioritizing social relationships.

Additionally, we observed that it was important for each participant to use every one of their 99 credits, thus exerting every last drop of individual influence. Participants even redistributed their credits, thus reconfiguring their initial spread of votes over the ballot, to be able to spend all of their credits. (In QV-voting, depending on how a voter's credits are spread across ballot issues it's not unusual that a few credits are left over.) This reassigning of credits indicates that individual preferences are paramount during voting. But in contrast, when the collective result was revealed, it was ubiquitously accepted without any discord. In the end, the 'voice' of the community as a whole eclipsed individual agendas. As is demonstrated in our short film documenting the workshop (see link on page 32), this embrace of the collective result paved the way for unfettered lively, engaging deliberation.



→ Redistributing credits during a voting round.

Reflections

Following our situated experiments with our quadratic voting tool, here we'd like to share some reflections connected to the research outcomes in the previous section.

During our workshop, we expressed ballot issues as questions. This raised many eyebrows within the group as to the exact meaning of the terminology being used. For instance, 'surrounding neighborhood' or 'greenery' did not always mean the same thing to different wooncoop members. Additional clarification was needed. We suggest defining and agreeing upon subjective terminology before ballotizing, so everyone is on the same page. Another (time saving) approach is to use agenda points instead of questions, as these are punctuated and concrete, thus less open to interpretation. Our tool uses badges to flag different notable voting outcomes, indicating more or less friction per issue. For instance, an issue outcome split down the middle is tagged as polarizing. Depending on these different kinds of outcomes, the group can choose different courses of action. This raises the question of how to sort the voting data in the interest of a particular community. In other words, at what point does the community describe an outcome as polarizing or at what point is there enough commonality reflected in a certain issue outcome to move ahead with a binding decision? Commons professionals can work together with communities to define thresholds for sorting and assigning badges to voting outcomes– to delineate which issues should be put up for further deliberation and which decisions can be interpreted as binding.

This also presents a new challenge: when and how to communicate these complex outcomes to community members. Following a voting round, participants are eager to immediately hear results. While some straightforward results can be explained right away, all issues hold within them multidimensional outcomes that require timely professional review and mediation. More research is needed to determine in which ways this spectrum of information can best be communicated and applied– to the broader arc of decision-making and iterative rounds of deliberation.

Another consideration is how much data transparency benefits community members. We noticed that complex results can overwhelm people unfamiliar with this method. Processing the assemblage of data produced by QV to determine what is useful to the community can best be done by someone who understands the method and can effectively translate the data-based outcomes to participants. Here, we envision a commons-professional as an interpreter, as the tool itself is not a stand-alone solution.

An overarching design consideration is the extent to which users must completely understand the quadratic method, or just trust the tool. This presents a challenge for designers, who must cultivate this trust through UI design, while not overwhelming users to the point of distraction.

Conclusion

In our workshop with House of Hope (CLT H-buurt) we observed how the wooncoop was trying-out digital decision-making tools in search of means of decisionmaking that could streamline these processes, and at the same time more righteously articulate the diverse opinions of members. This led us to delve into how the QV method could be of affordance to the community. We designed a QV prototype to make this method more accessible to novice users, to thus be able to test it in-situ. We set out to find out if/how enacting QV in the context of be-commoning can aid communities during the lengthy, often messy, non-linear affair of decision-making. In the three workshop outcomes we observed the potential of quadratic voting, and how our tool can guide communities and commons professionals in navigating and steering decision-making.

Ballotizing issues galvanized previously informal and long-winded discussions. This helped to concretize issues and allowed wooncoop members to engage more formally with unresolved issues.

Our QV tool worked like a radar, by detecting levels of friction in the voting outcomes and tagging these on the results page. In turn, the group could choose to readily take up an issue, or reserve ones that merited more deliberation. As a result, the ballot could be whittled down based on different degrees of consensus.

Workshop participants pointed out that viewing the collective voting result as opposed to scrutinizing individual responses created more harmony. This led to unprejudiced deliberation following the voting round. In this way, the prototype helped to prioritize social relationships and steered the discussion away from individual preferences and agendas.

To build on the preliminary findings in this article, we look forward to additional research using quadratic voting in-situ and during be-commoning– both with the Community Land Trust H-buurt and other budding resource sharing communities. We are excited to find out more about the ways in which commons professionals can use QV for decision-making to contribute to the rise of new commons.



To see more about our situated research using Quadratic Voting please watch our short film documenting the workshop Design for Collective Decision-making, in cooperation with House of Hope. It includes various facets of the workshop, including our voting tool in action, voting outcomes and the resulting discussions, and interviews in which wooncoop members reflect upon using QV during be-commoning.

→ https://www.youtube.com/watch?v=n0CEpT7Z0Eo&t=1s

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This report is one of the results of the research project Charging the Commons. It documents the findings of our project in the H-Buurt (Amsterdam Bijlmer), which took place during 2022-2023. It explored methods and designs for decision-making during the be-commoning process. This research was in cooperation with the Community Land Trust H-Buurt and their wooncoop House of Hope, with contributions from And The People and Common City Development. We wish to thank the members of the CLT H-Buurt/House of Hope for their dedicated cooperation. Special thanks to Rosamel E. Abeka Okyere-Safo, Moses Alagbe and Dieuwer Duijf for their generous and ongoing commitment to our research. And thanks to Jack Henderson and RadicalxChange for their input and feedback.

Charging the Commons investigates the be-commoning (design) process in which new urban commons are initiated, usually in a collaboration between citizens and professionals. The project is an initiative of the Civic Interaction Design Research Group at the Amsterdam University of Applied Sciences, and is carried out in collaboration with the Situated Art & Design Research Group at Avans University of Applied Sciences.

Partners



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Our quadratic voting prototype is available on GitHub https://github.com/WesWeCan/ quadratic-commons

Our quadratic voting web tool quadratic-commons.org

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