

CROWDSOURCED
OFF-ROAD TRAFFIC LAW
EXPERIMENT IN
FINLAND

Report about idea crowdsourcing
and evaluation

Tanja Aitamurto
Hélène Landemore
David Lee
Ashish Goel

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Preface: Why societies should learn from children

Children learn by observing, imitating, experimenting and doing. Societies could learn from children.

We can complement and hopefully replace arduous and bureaucratic processes with piloting and demonstrating promising ideas. We can think big, start small, fail quickly and scale fast.

That in mind the Committee for the Future launched a pilot project on crowdsourcing legislation. We were intrigued and inspired by various international examples - not least by the famous experiment to crowdsource the Icelandic constitution (which, incidentally, failed).

We wanted to do something useful and unique. That is why we coupled with the Ministry of the Environment to crowdsource a bill on off-road traffic. To our knowledge, this was one of the first times a draft bill had been opened up for crowdsourcing at this stage and to this extent.

The report you are reading is a partial account of what we did and what happened. It also provides, to some extent, lessons learnt and tips for people interested in applying crowdsourcing for democracy.

I would like to take this opportunity to thank all the people involved: Tanja Aitamurto, Hélène Landemore and their team for reviewing and researching our pilot project and writing this report; the people on the Committee for the Future and the Ministry of the Environment for daring to think outside of the box; and of course the people who made it all happen, participants in crowdsourcing.

However, our story is not over yet. The real proof of the pudding is in the eating: how the ideas harvested through crowdsourcing will be put to use in redrafting the bill, how other people will learn from our successes and failures to implement their crowdsourcing projects.

We have to learn like children.

Oras Tynkkynen

vice-chair, lead of the crowdsourcing project
Committee for the Future

1. Introduction

This report describes a crowdsourced off-road traffic law-making process in Finland, namely idea crowdsourcing for law-reform and idea evaluation. The project was initiated by the Ministry of the Environment of Finland and the Committee for the Future of the Finnish Parliament.

The project tests crowdsourcing as a method for participatory and direct democracy in an online context. The project goal is to identify ways in which citizens can participate in policy-making online in a meaningful fashion. The goal is also to gather information about such processes, to create knowledge of them, and to share that knowledge for the improvement of governance. Methods for direct and participatory democracy in the recent years have raised much interest both among policy-makers and academics, yet there remains a lack of knowledge and, in particular, empirical evidence about these methods. We hope that our work will contribute to filling that gap.

The project, which we like to call “The Finnish Experiment” for the brevity, was divided into several stages. In the idea crowdsourcing stage, the online participants - basically anybody who was interested in participating - were asked to share their ideas and perspectives about off-road traffic and the law regulating it. The goal was to gather a variety of perspectives about off-road traffic and to source a large number of ideas, which could be considered to be channeled into the law. Hundreds of Finns shared hundreds of ideas on an online platform (www.suomijoukkoistaa.fi) in the spring of 2013. The ideas were then evaluated by using a crowd evaluation tool (CrowdConsensus/Joukkoarvio) by a crowd of hundreds of interested citizens in the fall of 2013. An international expert panel also evaluated the ideas.

This report describes the crowdsourcing and evaluation processes and the outcomes. The report also details research findings based on participant interviews, netnography and a survey. We also convey research findings from idea evaluation using computational methods. The goal of the report is to give an overview about the process and to provide an understanding of what the project outcomes mean in a larger societal context.

The report is structured so that first we introduce the team who contributed to the project. Then we present the background of the project and its significance to Finnish society and to the larger community concerned about the future of democracy. In the following chapters we describe the crowdsourcing and evaluation stages. Then we lay out some theoretical framework about deliberation and then proceed to the research findings, both from the idea crowdsourcing stage and the evaluation stage. Then we present the challenges and lessons learned in the project. Finally, we detail policy recommendations, which we hope will help the Ministry of the Environment to proceed with the law-reform process and to use citizens’ input in a meaningful way and keep citizens engaged also in future.

Lastly, we want to thank the Finnish citizens who participated in the crowdsourcing and evaluation processes and patiently filled out several surveys and gave interviews to the authors and sent feedback in emails in the past 9 months. Without them none of this work would be possible.

San Francisco, California 13.10.2013

Tanja Aitamurto H el ene Landemore David Lee Ashish Goel

2. Team Members

In this chapter, we introduce the team members who have contributed in the project.

Tanja Aitamurto is a visiting researcher at the Data and Democracy Initiative at the Center of Information Technology Research in the Interest of Society at UC Berkeley. In her PhD project, she examines how collective intelligence, whether gathered by crowdsourcing, co-creation or principles of open innovation, impacts processes in journalism, public policy-making and design. Her work has been published in several peer-reviewed journals, such as the *New Media and Society*. Related to her studies, she advises the Government and the Parliament of Finland about Open Government principles, for example about how open data and crowdsourcing can serve democratic processes.

Aitamurto has previously studied at the Program on Liberation Technology at the Center on Democracy, Development and the Rule of Law at Stanford University. She has also studied at the Center for Design Research in Mechanical Engineering and at the Innovation Journalism Program at Stanford University. She is a PhD Student at the Center for Journalism, Media and Communication Research at Tampere University in Finland, and she holds a Master's Degree in Public Policy, and a Master of Arts in Humanities. Prior to returning to academia, she made a career in journalism in Finland specializing in foreign affairs, reporting in countries such as Afghanistan, Angola and Uganda. She has also taught journalism at the University of Zambia, in Lusaka, and worked at the Namibia Press Agency, Windhoek. More about Tanja's work at www.tanjaaitamurto.com and on Twitter @tanjaaita.

Ashish Goel is a Professor of Management Science and Engineering and (by courtesy) Computer Science at Stanford University, and a member of Stanford's Institute for Computational and Mathematical Engineering. He received his PhD in Computer Science from Stanford in 1999, and was an Assistant Professor of Computer Science at the University of Southern California from 1999 to 2002. His research interests lie in the design, analysis, and applications of algorithms; current application areas of interest include social networks, Internet commerce, and large-scale data processing. Professor Goel is a recipient of an Alfred P. Sloan faculty fellowship (2004-06), a Terman faculty fellowship from Stanford, an NSF Career Award (2002-07), and a Rajeev Motwani mentorship award (2010). He was a co-author on the paper that won the best paper award at WWW 2009. Professor Goel is also a research fellow and technical advisor to Twitter, Inc.

Hélène Landemore is Assistant Professor of Political Science at Yale University. A French native, she graduated from the Ecole Normale Supérieure and Science-Po, Paris. She then moved to the US and received her PhD in political science from Harvard University in 2008. She is the author of *Democratic Reason: Politics, Collective Intelligence, and the Rule of the Many* (Princeton University Press, 2013) and co-editor (with Jon Elster) of a collection of essays on *Collective Wisdom: Principles and Mechanisms* (Cambridge University Press: 2012). She has also published a book in French on *Hume. Probability and*

Reasonable Choice (PUF: 2004) and various articles in peer-reviewed journals on topics ranging from collective intelligence, deliberative democracy, majority rule, participation, the philosophy of social sciences, and most recently the Icelandic experiment in inclusive (and partly crowdsourced) constitution-making.

David Lee is a MS-PhD candidate in Electrical Engineering at Stanford University, and completed his undergraduate degree in Electrical Engineering at the California Institute of Technology. His current research interests are in the application of randomness and computation to social and biological systems. Specifically, he is interested in decision-making and collaboration for the crowd, and computation in biologically inspired urn models. David is the recipient of the NSF Graduate Research Fellowship (2012-2015).

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3. Motivation for the experiment and importance for the national and international community

There is a growing consensus in political and academic circles that representative government as we have inherited it from its 18th century inventors needs to be iterated. In a technology-empowered age--where most individuals in industrialized democracies have access to a smartphone or a computer and use them to give and receive feedback about products, services, and work performance--there is growing frustration among these same individuals in their lives as citizens about the lack of responsiveness from political institutions perceived as distant, slow, disconnected, and dated, if not entirely corrupt and incompetent. The American Congress is infamous for its historically low 10% approval rate. Most national governments, particularly national legislatures, in Europe face the same crisis of legitimacy. After the 2008 financial and economic crisis, many governments were prompted to resign. In at least one case (Iceland), citizens' discontent almost led to a constitutional change. In the US, prominent advocates of constitutional reform (eg. Lessig 2010 and Levinson 2012) are also calling for a constitutional convention and, short of that, profound reforms of existing representative institutions.

Meanwhile, many "democratic innovations" are being experimented with at the municipal and state levels in various countries and are supported by cautious popular enthusiasm for their democratic promise. Participatory Budgeting--a technique that consists in directly involving citizens in key budgetary decisions at the city, state, or even national level--has spread from Brazil to Finland to other countries in the world, as well as cities like New York and Chicago and Vallejo in the US, Reykjavik in Iceland and Helsinki, Finland. Deliberative polls, the technique created by research James Fishkin from Stanford University, though non-binding for the most part, are now used in several countries around the world and have become an established way to involve randomly chosen citizens in fruitful reflections about important reforms or policy-issues. The famous experiment of the British Columbia Citizens' Assembly, based on the quasi-random selection of a hundred citizens, also proved that average citizens are able to produce informed and smart policy-recommendations on subjects as complex as electoral reform. Smaller-scale experiments, like Citizens' Juries or the Danish Consensus Conferences, similarly aim to empower citizens at various levels of the polity.

Finally, crowdsourcing is a technique that is now helping businesses, administrations, and some branches of government to tap the collective intelligence of the people. The most spectacular example of the successful use of this technique was the partly crowdsourced manhunt for the Boston terrorist last summer. Perhaps less well-reported on but equally successful was the way the United States Patent and Trademark Office tapped the wisdom of self-selected crowds to accelerate and address a backlog of patent reviews (see Noveck, 2004). More detailed discussion about these notions in the section 6.2. later in this report.

What had not been tested so far, at least to our knowledge, is the ability of crowds to help generate better laws. The Icelandic example of a partially crowdsourced constitution can be taken to have shown that crowds can be useful in generating comments about existing proposals (the various constitutional drafts put out by the Constitutional Council) but

there are limitations to what this particular experiment shows (see Landemore, 2013a&b; Landemore, forthcoming). Brazil similarly has been experimenting for some years with e-democracy and partially crowdsourced legislative processes, as well. Nevertheless, according to the implicated observers, those projects had only incorporated very incipient results with regard to enhancing representativeness in decision-making processes, aggregating collective intelligence to legislative process or contributing transparency to parliamentary performances (Faria, 2013).

The Finnish experiment, as we call the crowdsourced off-road traffic law reform in Finland in short, has the potential to show that citizens are able to produce viable ideas that can contribute to existing laws, perhaps even form the basis, if not the full content, of entirely new laws. This experiment is thus crucial, not just for Finland but for the world, to see whether crowds are able to contribute to law making in essential ways.

Of course, this experiment will provide just one data-point and would need to be replicated and shown to be scalable to provide truly universal lessons, but we believe the future of democratic innovations starts with small-scale prototyping. The partly crowdsourced reform of the Finnish law on off-road traffic is just such a crucial first experiment. These type of prototypes hopefully will help us understand several important aspects of participatory policymaking efforts, including motivating factors for citizen participation and important features in the process and technical design of participatory practices.

4. Key concepts

Crowdsourcing can be defined as an open call for anyone to participate in an online task (Brabham, 2008; Estelles-Arolas and Ladrün-de-Guevara, 2012; Howe, 2008) by submitting information, knowledge, or talent. Unlike in outsourcing, in which a task is assigned to a specific agent, in crowdsourcing there is no target group defined *ex ante*; rather, ‘the crowd’ refers to an undefined group of people self-selecting from within an even larger group of people (theoretically the entire pool of people who have access to the internet), who choose to participate in an open call online. Crowdsourcing has become a popular tool to engage people in processes ranging from urban planning to solving complex scientific problems (Brabham, 2010; Aitamurto, Leiponen and Tee, 2011). Research findings indicate that if a task—for instance a scientific problem-solving task or design task—is conducted by persons beyond the immediate field of expertise, the solutions can have more novelty and creativity value than those that are conducted within the known fields of expertise (Jeppesen and Lakhani, 2010; Poetz and Schreier, 2011). Crowdsourcing is also used in the form of ‘micro-tasks’, which are small, paid jobs distributed online to an anonymous worker crowd on microtasking markets such as Amazon Mechanical Turk (Buhrmester and al., 2011). In the context of this study, crowdsourcing is examined as an unpaid voluntary act.

Crowdsourcing as a means to channel citizen activism around societal issues has become more common in recent years. For instance, applications such as SeeClickFix and FixMyStreet provide a way for citizens to map problems that they encounter in their surroundings on an online map, and thus report the problems to city maintenance services, who then fix the problems and report progress online. Similarly, crowdsourcing applications such as Ushahidi are used to monitor election fraud, sexual harassment, and corruption in several countries (Meier, 2011). However, these crowdsourcing initiatives are not always run in collaboration with the government.

Crowdsourcing for policy-making in government is a relatively new phenomenon but one that recently has been gaining ground. One of the best known instances occurred in Iceland in 2011, when the country included a crowdsourcing element in its constitutional writing process (see Landemore, 2013) by allowing citizens to freely comment on constitutional drafts regularly published on a dedicated website and on a Facebook page for the Icelandic Constitutional Council. Beyond the now iconic Icelandic experiment, there are a multitude of instances of crowdsourcing in both local and national governance across the world. Federal agencies in the United States have been crowdsourcing information and opinions for their strategies for several years. For instance, the Federal Emergency Management Agency (FEMA) crowdsourced reform of the National Incident Management System, asking for citizen input into ways of improving the emergency management system at all levels. Furthermore, cities in several countries across the world are increasingly applying the methods of participatory budgeting (Dos Santos, 1998) in their budget preparation processes, including the use of crowdsourcing. For example, the U.S. city of Chicago, Illinois used crowdsourcing in the 2012 and 2013 city budget preparations; the city of Calgary in Canada used crowdsourcing in their budget process in

2011 (for more instances in which crowdsourcing has been used in policymaking, see Aitamurto, 2012).

Online citizen petition sites, such as We the People in the United States, "equally unrepresentative" "equally unrepresentative" and citizen initiative platforms, such as Open Ministry in Finland, can also be seen as a way to apply crowdsourcing to policy-making. On these websites, citizens can both propose a petition for policy change and sign one that has already been proposed. Although We the People lacks a mechanism for processing citizen petitions to ensure effectiveness, in the Finnish case, the online petitions can in theory have a direct impact on the established policy-making agenda. The Finnish legislation indeed stipulates that if a petition gets enough support (at least 50,000 signatures in six months), it must be discussed in established political institutions (either the parliament or the government). In Europe, the European Citizens' Initiative gathers citizen initiative proposals and signatures from EU citizens. The initiatives must gather one million signatures from a certain number of member states in order for the European Commission to consider the petition (European Citizens' Initiative, 2013).

When used in a political context, crowdsourcing functions as a method for direct and participatory democracy. National and local governments across the world increasingly are applying crowdsourcing as a part of their Open Government practices (Yu and Robinson, 2012), which enhance transparency and public engagement as principles of good governance.

5. Description of the crowdsourced idea generation process

The crowdsourced ideation process in the off-road traffic law reform followed two phases, which enabled problem mapping, ideation, knowledge sharing and information exchange among participants on an online platform (www.suomijoukkoistaa.fi). The first phase of the process began in January 2013 and ended at the end of March 2013. The second phase started in April 2013 and ended in June 2013.

The user-interface of the online platform is illustrated in Figure 1.

The screenshot shows the user interface of the online platform. At the top, there is a blue header with the text "Maastoliikennelaista. About off-road traffic". Below the header, there is a navigation bar with the text "#509 | Suomeksi | Englanti | Terveystieteiden tutkimuskeskus | Suomeksi". The main content area features a welcome message: "Tervetuloa Joukkoistamista Suomessa -yhteisöön!" followed by a sub-header "Tervetuloa keskustelemaan maastoliikenteestä ja siitä säätelevästä maastoliikennelaista." and a question "What is this about? What will happen now? How does this work? Instructions". Below this, there are four tabs: "Mistä on kysymys?", "Mitä nyt tapahtuu?", "Miten tämä toimii?", and "Ohje". The "Mistä on kysymys?" tab is selected, showing a question "Mistä on kysymys? What is this process about?" and an image of a snowmobile. The text explains that the Ministry of Transport is consulting on off-road traffic law and asks for suggestions. Below the question, there is a section "Vaikuta! Have a say!" with instructions to provide suggestions and a "Lähetä uusi idea" button. At the bottom, there is a progress bar with four stages: "1. vaihe: Keskustelu", "2. vaihe: Koonti ja palaute", "3. vaihe: Jatkokeskustelu", and "4. vaihe: Koonti ja palaute".

Figure 1. User-interface of the online platform for crowdsourcing off-road traffic law process.



Figure 2. Voting and keyword function in the user-interface.



Figure 3. Commenting function on the crowdsourcing platform.



Figure 4. Activity leaderboard on the crowdsourcing platform.

Figures 1, 2, 3, 4

User-interfaces of the online platform for crowdsourced off-road traffic law process. The public is asked to submit their ideas and perspectives regarding off-road traffic and the law regulating it.

As the reader will see, users could propose ideas on the platform, comment, and vote others' ideas up or down. All of the crowd-generated input was visible to the public online. In order to leave a comment, propose an idea, or vote on the platform, the user had to register on the site. They could choose to stay anonymous, use their real names or create a nickname. A verifiable email address was required for registration.

The voting function is illustrated in Figure 2 and the commenting function in Figure 3. Users could also post pictures and other attachments on the platform, as well as tag their ideas and comments with key words that were aggregated and visible to all users. By submitting ideas, commenting, and voting, the users gained points, which were turned into badges on the online platform, as illustrated in Figure 4. Also, features such as user activity stream, the possibility to follow ideas and users, sending private messages, keyword tagging, automatic search for similar ideas, choosing tabs to show most popular ideas or most recent ones or based on the topic category were provided on the platform. All the user-generated content was automatically translated into English and Swedish with the support of multi-language system in the crowdsourcing software. Web browser Google Chrome's automated translation feature translated the other content decently into languages like English.

In addition, a website (www.maastoliikennelaki.fi) was established to provide access to information about off-road traffic and the law regulating it. The existing law and the expired bill (more information about the expired bill can be found in the next chapter) were published on the website, as well as research about off-road traffic. A video with the Minister of Environment Ville Niinistö explaining the rationale behind the crowdsourced process and asking citizens to participate was published on the website. Additionally, the website had a blog, which was used to publish updates about the proceedings, as well as a widget-integration to the crowdsourcing platform.

5.1. First phase

The crowdsourcing sequence was conducted in two phases, as illustrated by Figure 5 in the Appendix 1, <http://bit.ly/197CenL>. In the first phase, based on conversations with civil servants in the Ministry of Environment (who are experts on off-road traffic law and wrote the expired bill), 10 main areas were identified as a basis for the crowdsourcing process. The areas of focus included broad topics, such as problems with off-road traffic, and a set of more defined areas, such as regulating age limits in off-road traffic, regulating off-road traffic emissions, and regulating route establishment process. There was also a category called 'Propose your own topic', in which the participants could propose a topic of their own interest which was not on the provided topic list. See the topic areas listed in Figure 6 in the Appendix 1, <http://bit.ly/197CenL>.

The topic areas in the first phase followed largely those that the Ministry of the Environment considered relevant in off-road traffic reform. Those areas were mainly based on an expired bill, which the previous government proposed to the Parliament. The previous government of Finland proposed a bill to the Finnish Parliament to reform the off-road traffic law in 2010, but the bill expired in parliament after raising controversy. Some of the controversial issues in the bill focused on the extent to which land owners have rights to prevent off-road traffic routes from being established on their property, whether new routes should be established on a need-based consideration (the current system) or on a right-based consideration (the mechanism the controversial bill proposed), and at which level the decisions about new routes should be made (local, municipality level or county level) and whether snowmobile routes can be automatically turned into summer routes for ATVs and other summer time off-road traffic.

In the first phase, the public was asked to share their interpretations of the problems raised by the current off-road traffic regulation and to share ideas and perspectives. The prompts for the participants included information about the existing law and a set of questions for them to answer. Within these areas, participants could propose ideas and share their concerns and experiences about off-road traffic.

The first phase generated more than 340 ideas and conversation starters, and 2,600 comments in reaction to the ideas and conversation starters, and 19,000 votes up and down from about 700 users. The participants' input was then analyzed; their ideas and comments were sorted into categories, which served as the basis for the design of the second phase.

The amount of activity in the process reflects interest among the Finns about off-road traffic and the law governing it. Conversations were lively. The participants actively shared links about off-road traffic law regulation in Finland and internationally. They also shared information about off-road traffic, accidents, safety and other off-road traffic issues across the country. Links to the reports and statistics about off-road traffic shared by the participants are accessible on the following Google Spreadsheet:

<https://docs.google.com/spreadsheet/ccc?key=0AtO2meyl24nXdDd1WW5EYIAxWFFwY2NwVHktNmNyREE#gid=0>

Links to news articles and videos about off-road traffic shared by the participants are accessible on the following Google Spreadsheet:

<https://docs.google.com/spreadsheet/ccc?key=0AtO2meyl24nXdDd1WW5EYIAxWFFwY2NwVHktNmNyREE#gid=0>

Interestingly, the participants shared concerns regarding off-road traffic more widely than the initially defined 10 problem areas. This was a result of extending the knowledge search from the traditional participants, such as interest groups and other stakeholders, in a law-making process to “a boundless, undefined” crowd. Thus, the first phase functioned as problem mapping and as need-sensing beyond traditional experts. The concern areas raised by the participants included the following: safety in off-road traffic, illegal riding, lack of routes/trails, noise pollution, harm to the environment, differences in the implementation of the law in different parts of Finland, and lack of information and knowledge about the current regulation.

The participants’ input was analyzed so that the problems in the submissions were summarized, as were any solutions if they were proposed in the submission. Larger ‘challenge areas’ were then refined. Those challenge areas were then transported into the second phase of crowdsourcing, where they functioned as a basis of the idea generation process, as will be described in more detail in the following chapter.

Moderation on the online platform in the first phase was very light. Some follow-up questions and clarifications were presented by the moderators. As a principle, a comment was removed if it was insulting to other participants, or if it was inappropriate. There was very little need to remove comments because the conversation was mainly civil and constructive. About 10 comments had to be removed because they were inappropriate in content or tone. Based on user interviews conducted by the authors and feedback on the platform, the participants wanted to have more structure in the conversations, i.e., more clearly defined problem areas. Therefore, more structure was added to the second phase.

When the participants asked questions about the law, the moderators passed relevant questions on to civil servants in the Ministry, asked for a response and then posted the response on the platform.

5.2. Second phase

In the second phase, participants were asked to propose solutions to the problems identified in the first phase. The identified problem areas were the following: Routes, Monitoring, Safety, Regulations and Rights, Nature and Environment, Information Gathering and Usage Societal Values, and Improvement of the Crowdsourced Law-making Process. These broader categories were divided into narrower topic areas with specific questions about each issue, as illustrated in Figure 7 in the Appendix 1, <http://bit.ly/197CenL>.

For instance, the ‘Safety’ category was divided into the subfields of ‘Improving Safety in Off-road Traffic’ and ‘Safe Transition Traffic Off- and On-road’. There were 34 defined subcategories all together. The main categories and subfields were created based on the crowd input generated in the first phase, including the request that topic areas be more clearly distinguished. Just as in the first phase, participants could also propose their own topic in the ‘Propose your own topic’ section.

By the end of June 2013, when the idea generation phase closed, there were 170 ideas generated with 1,300 comments and 6,000 votes from about 730 registered participants.

In the second phase, moderation activity on the platform (performed by Finnish native Tanja Aitamurto and research assistant Tiiamari Pennanen)—which focused on asking further questions about the ideas proposed by participants—was increased. The goal was to make the participants think about their ideas in a more detailed manner and to share as much as possible about those details with other participants. The follow-up questions seemed to have the impact of sparking further comments and more deliberative reasoning among the participants.

Just as in the first phase, the participants actively shared information about off-road traffic and related issues by sharing links and attachments on the crowdsourcing platform. Those materials are accessible on the following Google Spreadsheet: <https://docs.google.com/spreadsheet/ccc?key=0AtO2meyl24nXdHJ5UkQwNFRqSjVvOUZVemRTcXBNMmc#gid=0>

Again, the activity on the site was mainly civil and constructive, and only some comments needed to be removed. Altogether, about 20 comments were removed from the first and second phases.

5.3. Idea categories

When the second phase concluded, the ideas were analyzed and categorized into 11 categories with associated subcategories (further description of the analysis process is included later in this report). The categories are the following:

1. Location of routes. How should the location of routes be determined?

1.1. Regulating route locations

1.2. Criteria for route location based on the geographic location, land ownership and the type of natural environment

1.3. Deciding route locations based on existing buildings and structures

1.4. Deciding route locations based on existing traffic patterns

1.5. Restrictions to route locations

1.6. Altered regulations based on geographic location. Should Lapland, the northern part of Finland, have a different set of regulations than the rest of the country?

2. Establishing new routes. Authority to prevent routes, route permission periods, maintenance and reconstruction

2.1. Possibility to establish a route on landowners' property regardless landowner's will

2.2. Right to prevent or allow routes

2.3. The time frame of route permits

2.4. The maintenance of routes and trails

2.5. Reconstruction

3. Choice of the responsible authorities for deciding on new routes, gathering information on off-road traffic, and deciding on appeals for change. Which authority should decide about new routes?

3.1. Authority to decide about routes

3.2. Responsibility for information gathering

3.3. Complaints

4. Route-setting procedures. How should the off-road traffic law regulate about the organization and efficacy of the route-setting procedures for off-road traffic?

4.1. Information and communication about route plans and procedures

4.2. Requirements for route plans

4.3. Impact evaluation of route plans

5. Route impact evaluations. How could the route impact evaluations be conducted the best during the route setting process?

5.1. Financial aspects in impact evaluation

5.2. Nature aspects in impact evaluation

5.3. Overall impact of off-road traffic in impact evaluation

6. Financial compensation for landowners. What would be the best way to compensate the landowner for the use of his land for off-road traffic?

7. Safety. How can the safety of off-road traffic be improved?

7.1. Ideas about improving safety by changing driver's license requirements for off-road traffic and requiring training for snowmobile riders

7.2. Ideas about improving safety by regulating driving age

7.3. Improving safety by traffic arrangements

7.4. Improving safety by regulating monitoring systems

7.5. Improving safety by regulating the alcohol tolerance level in off-road traffic

7.6. Improving safety by defining requirements for the vehicle equipment

7.7. Improving safety by increasing the number of routes, allowing riding on regular roads and legalizing off-route traffic to connect between routes or trails

8. Illegal riding. How can illegal off-road traffic be decreased?

8.1. Decreasing illegal off-road traffic by legalizing practices that are currently illegal

8.1.1. Decreasing illegal traffic by allowing more off-route traffic to connect between routes or trails

8.1.2. Decreasing illegal traffic by establishing free-riding zones

8.2. Decreasing illegal off-road traffic by altering monitoring systems, traffic arrangements and punishment

8.2.1. Decreasing illegal off-road traffic modifying traffic arrangements

8.2.2. Decreasing illegal off-road traffic by altering monitoring systems

8.2.3. Decreasing illegal traffic by punishment

8.2.4. Decreasing illegal traffic by altering registration systems

9. Preparatory process. How can the preparatory process of the off-road traffic law be improved?

10. Regulation of harm to nature, environment and neighbors

10.1. How should the law regulate about noise management?

10.2. Natural environment. How can the natural environment and wildlife be taken into account in the off-road traffic law?

10.2.1. Criteria and limits to regulate harm

10.2.2. Protecting nature by regulating traffic locations

11. Off-road traffic law and other laws. When should off-road traffic be regulated under other existing laws?

5.4. Communication efforts during the process

Information about the crowdsourcing process was disseminated via several press releases published by the Ministry of the Environment communication team. Social media was also used to spread information. Information about the project spread on online discussion forums and in organizational newsletters.

The topic was first mentioned in the Helsingin Sanomat, the leading daily newspaper in Finland with over 1 million readers, in December 2012.

The topic was picked up several times later by the media in the spring and summer of 2013. For instance, the project was covered in national newspapers such as Maaseudun Tulevaisuus and in regional newspapers such as Lapin Kansa and Turun Sanomat, as illustrated in Figure 8 below. In the fall of 2013, the Finnish Broadcasting Company ran a news piece about the project. The project also received international attention, e.g. at <http://democracyspot.net/2013/07/21/crowdsourcing-off-road-traffic-legislation-in-finland/>

Maastoliikennelaki kirvoitti eripuraa sijaan ajatustenvaihtoa



KOTIMAA | Turun Sanomat 4.8.2013 07:11 [Suosittele](#) 3

– Tämä on lausintäädännössä paras idea pitkään aikaan, sanoo ruvaniemeläinen Mikko Vanhatapio.

Moottonihamastraja ja safariopas iloitsi sitä, että tavalliset kansalaiset ovat saaneet ensi kertaa sanoo, mitä mieltä ovat maastoliikennelaista. Vanhatapio on sitä mieltä, että moottoniikkareitit pitäisi avata mönkijöille siitä osin kuin niistä ei ole kohtuutonta haittaa. Hänen mukaansa laillisten ajopalkkojen puute johtaa laittoman ajeluun.

– Jos valtion mallia on keksellä metsää jängällä mönkijän ura, en ymmärrä miksi se haltaisi ketään. Vanhatapio totessa.

Figure 8. Finnish newspaper Turun Sanomat published an article about the crowdsourced off-road traffic law reform.

6. Description of evaluation methods

In this chapter, we describe the methods, which were used to evaluate the crowd-generated ideas. The evaluation results will be presented in chapter 7 of the report.

6.1. Evaluation by the crowd

The purpose of the evaluation phase was to collect the opinions about the ideas from Finnish people, and to see the top ideas among the entire set of generated ideas. The crowd evaluation was open online for anybody to participate in, and thus, crowdsourcing was applied in the evaluation phase.

We collected two types of information: rating and comparison evaluations. In a rating evaluation, participants are asked to rate an idea on a scale from 1 to 5 (one star representing a poor idea, five stars representing an excellent idea). These ratings are then aggregated together by,

1. Normalizing the ratings to account for user biases (e.g. a tendency for certain users to always give high scores, or a tendency for certain users to never give extreme ratings).
2. For each idea, calculating the mean, median, and standard deviation of the ratings.
3. Using the mean and median to find top rated ideas.
4. Using the standard deviation to find how polarizing or consensual an idea is.

In a comparison evaluation, participants are asked to either choose a favorite idea out of two (pairwise comparison), or to rank several ideas in the order of their preference (ranking). These ratings are then aggregated together by,

1. For all rankings, calculating the comparison results for each pair of ideas in that ranking.
2. For each idea, calculating the fraction of comparisons in which it won. We refer to this as the Borda score.
3. For each pair of ideas, calculating which idea “won” by looking at all comparisons of this pair.
4. For each idea, calculating the fraction of other ideas (of the same category) which it won against (based on 3). We refer to this as the Copeland score.
5. Using the Borda and Copeland scores to find top rated ideas.

The evaluation took place on a tool built for crowdsourcing of ideas. The tool is called CrowdConsensus/Joukkoarvio and was accessible at www.joukkoarvio.com during the evaluation phase. After completing an entrance survey, the participants received an email invitation and they signed up for the evaluation tool. The tool provided a walk-through and instructions for evaluation.

Since there were well over 200 proposals on the platform, it was impractical to ask each participant to score and rank all the proposals. Instead, each participant received a random sample of the ideas for review. Roughly speaking,

1. For each idea, a “rating” task is assigned to a participant with the same probability.
2. For each category, a random subset of the ideas of the category are chosen and assigned to a participant as a “ranking” task with the same probability.
3. For each pair of ideas, a “comparison” task is assigned to a participant with the same probability.

The way that random samples are chosen is made in a way to ensure that

1. For a given idea, the set of ratings for that idea is a random (representative) sample of the crowd.
2. For each pair of ideas, the set of comparisons for the pair of ideas is a random (representative) sample of the crowd.

Each participant performed an average of 40 ratings, 25 comparisons, and 13 rankings. Roughly speaking (there are variations depending on the number of ideas in the category), each idea was rated an average of 51 times, compared an average of 63 times, and ranked an average of 76 times. The three evaluation methods are illustrated in the Figures 9,10, and 11.

Pisteytys

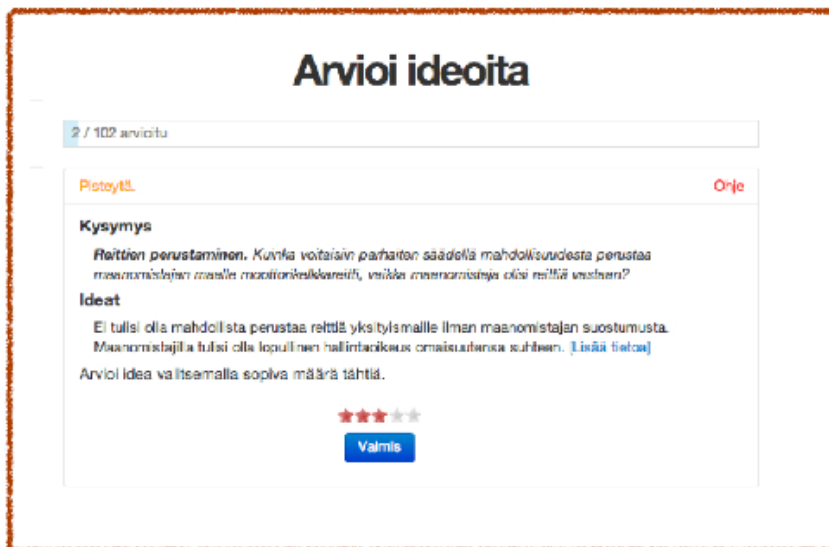


Figure 9. User-interfaces of the evaluation tool: Scoring method.

Järjestäminen



Figure 10. User-interfaces of the evaluation tool: Ranking method.

Vertailu

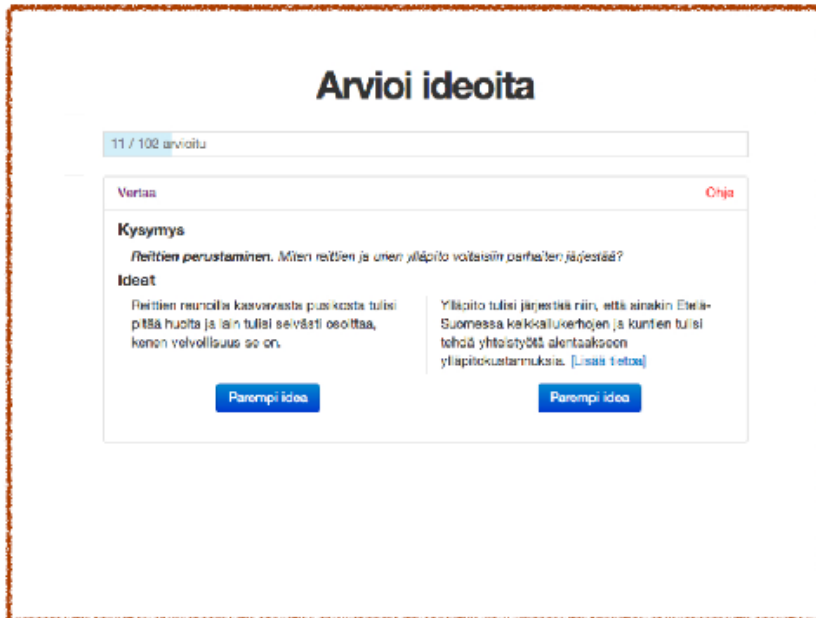


Figure 11. User-interfaces of the evaluation tool: Comparisons.

Both rating and comparison methods have different degrees of support in the various literatures (in engineering, political science, and social choice theory) with which the researchers on the team are familiar. Since each has its strengths and its weaknesses, we chose to calculate both types of information and use them to provide a check on each other.

The strength of rating is that it is a familiar approach used in practice (e.g. on restaurant reviews on Yelp, movie reviews on Netflix or political surveys) and provides quantitative information on each idea that is independent of other ideas. However, rating is also more susceptible to psychological biases. For example, it is vulnerable to different interpretations of the 1 to 5 scale (though we normalized for this in the presentation of the final results), may change depending on mood swings, and may also depend on presentation order of the ideas. It is also more time consuming than the ranking methods, as it allows evaluating only one idea at a time.

The strength of comparison is that both pairwise comparisons and ranking allows a participant to process more ideas at a time, and the relative order of a ranking is believed to be less susceptible to psychological factors and the order of presentation. On the other hand, comparison-based data only provides relative information, and not an absolute rating of the quality of an idea.

Ultimately we were able to generate an ordering of the top ideas along four dimensions: 1) the idea's mean rating (how many stars on average the idea received); 2) the idea's

median rating (the median number of stars the idea received); the idea's Borda count score (the fraction of comparisons it won); the idea's Copeland score (its number of wins in pair-wise comparisons).

In general, the results tended to converge along all dimensions but, where they did not, we typically privileged the median rating (which is less immune to outlier judgments and the possibility of strategic rating) and the Copeland score (which satisfies the Condorcet criterion). Using the Copeland score, we were able to identify many "Condorcet winners" (ideas defeating all other ideas in a pairwise comparison and thus scoring "1"). We believe those ideas can be confidently considered as "the most liked," except where they clash too much with the median rating (these proposals then fall under the category "problematic and/or ambiguous data," which will require more careful study in due course).

6.2. Evaluation by a globally distributed expert panel

Evaluation by expert panel was performed through 11 online surveys administered to about 34 experts (expert in this context refers to a person who has knowledge about the issues relevant to the off-road traffic law based on their profession or institutional position) in Finland, the United States, Iceland, Canada and Sweden. Each survey consisted of ideas in each of the 11 categories (see chapter 5.3. for the categories). The goal of the expert panel evaluation was to extend the knowledge base of the evaluators beyond national borders and to test a survey-based evaluation method in crowdsourced idea-evaluation. We also wanted to test how universal ideas can be or need to be so that they can be evaluated in a meaningful way.

The respondents were asked to rate ideas according to four different criteria (feasibility, efficiency, cost-efficiency, and fairness) along a seven-point scale. They were also asked to provide reasoning for their review choices. Additional information was given when relevant for the idea evaluation, marked with a 'Note from organizers' label.

All the questions in the survey follow the same formulation. An idea (in the example, from the safety category) would be asked to be reviewed in the following way.

Q8.1 Idea number 3: The age requirement for riding off-road vehicles should be changed to 9 years.

Note from the organizers: Currently, driving a snowmobile on a snowmobile route is allowed with a tractor license. For a tractor license, the minimum driving age is 15 years and drivers need to pass a written test about traffic rules. No driving classes are needed. No driving test is required to receive a tractor license. Driving a snowmobile or an ATV on off-road terrain, for example on a snowmobile or an ATV trail, is permitted without any driver's license. The driver has to be at least 15 years old. The same applies for driving on ice, beyond official snowmobile routes and ice roads: the driver has to be at least 15 years old. The current practice on farms is that children often learn to drive vehicles under the age of 15.

Q8.2 Effectiveness.

	How effective is the idea? (1)
Very ineffective (1)	m
Ineffective (2)	m
Somewhat Ineffective (3)	m
Neither Effective nor Ineffective (4)	m
Somewhat Effective (5)	m
Effective (6)	m
Very Effective (7)	m

(Presented with display logics based on previous responses)

Q8.3 Why do you think the idea is effective? (You rated the idea as either somewhat effective, effective or very effective)

Q8.4 Why do you think the idea is neither effective nor ineffective?

Q8.5 Why do you think the idea is ineffective? (You rated the idea as either ineffective, somewhat ineffective or very ineffective)

Q8.6 Ease of implementation.

	How easy is it to implement the idea in practice? (1)
Very difficult (1)	m
Difficult (2)	m
Somewhat Difficult (3)	m
Neutral (4)	m
Somewhat Easy (5)	m
Easy (6)	m
Very Easy (7)	m

Q8.7 Why do you think the idea is easy to implement? (You rated the idea as either very easy, easy or somewhat easy to implement.)

Q8.8 Why do you think the idea is neither easy or difficult to implement? (You rated the idea as 'neutral'.)

Q8.9 Why do you think the idea is difficult to implement? (You rated the idea as either very difficult, somewhat difficult or difficult to implement)

Q8.10 Fairness.

	How fair is the idea? (1)
Very unfair (1)	m
Unfair (2)	m
Somewhat unfair (3)	m
Neither fair or unfair (4)	m
Somewhat fair (5)	m
Fair (6)	m
Very fair (7)	m

Q8.11 Why do you think the idea is fair? (You rated the idea as either somewhat fair, fair or very fair.)

Q8.12 Why do you think the idea is neither fair or unfair? (You rated the idea as neither fair or unfair.)

Q8.13 Why do you think the idea is unfair? (You rated the idea as very unfair, unfair or somewhat unfair).

Q8.14 Cost-efficiency.

	How cost-efficient is the idea? (1)
Very cost-inefficient (1)	m
Cost-inefficient (2)	m
Somewhat cost-inefficient (3)	m
Neither cost-efficient or inefficient (4)	m
Somewhat cost-efficient (5)	m
Cost-efficient (6)	m
Very cost-efficient (7)	m

Q8.15 Why do you think the idea is cost-efficient? (You rated the idea as either somewhat cost-efficient, cost-efficient or very cost-efficient).

Q8.16 Why do you think the idea is cost-inefficient? (You rated the idea as very cost-inefficient, cost-inefficient or somewhat cost-inefficient).

Q8.17 Why do you think the idea is neither cost-inefficient or cost-efficient? (You rated the idea as neither cost-efficient or cost-inefficient)

About 15 respondents have completed the online survey by mid-October, and we are waiting for the remainder to complete the surveys before analyzing the expert panel results.

7. Research findings: Crowdsourced idea generation and problem mapping

In this chapter, we describe the most important research findings based on analysis of netnographic and participant interview data of the idea crowdsourcing. The preliminary findings indicate that there is deliberation in the crowdsourcing process and that it occurs to a certain degree organically among participants, despite the lack of direct incentives for it. Second, the findings indicate a strong educative element in crowdsourced law-making process, as the participants share information and learn from each other. The peer-learning aspect could be made even stronger through the addition of design elements in the process and in the crowdsourcing software. The chapter 7 is based on Aitamurto's and Landemore's (2013) research paper: *Democratic Participation and Deliberation in Crowdsourced Legislative Processes: The Case of the Law on Off-Road Traffic in Finland*, which is accessible here:

http://comtech13.xrce.xerox.com/papers/paper1_aitamurto_landemore.pdf

To provide more details about these findings, we first lay out a few core definitions of deliberation and participation. The following section describes the data gathering and analysis methods used. The following section lays out our empirical results and the interpretations we derive from them. Finally, in the fourth section we propose to replace the unrealistic goal of 'mass deliberation' with the more realistic one of 'distributed deliberation', in which crowdsourcing processes can find an important place as one of several loci and sequences of meaningful democratic deliberation.

7.1. Deliberation and participation

In order to determine whether the Finnish crowdsourcing experiment qualifies as deliberative, we first need to establish some definitions. Democratic deliberation is at minimum 'the public use of arguments and reasoning among free and equal individuals' (adapted from Cohen, 1989). 'Use' can be further specified as the 'exchange' of arguments in order to convince someone of the validity of a given claim or, conversely, to refute a given claim's validity. The deliberative element, specifically, has to do with the reasoned exchange of arguments (for the emphasis on reasoning, see also Mercier and Landemore, 2012; Landemore and Mercier, 2012). The democratic aspect, which we bracket and take for granted here but is equally needed for the experiment to count as fitting under the ideal of 'deliberative democracy', has to do with the requirement of the 'free and equal' standing of participants.

7.2. Research questions, methods & data

Despite the increasing use of crowdsourcing at several levels of governance, there remains a lack of research on crowdsourced policy-making processes. Several important questions remain unstudied, beginning with the overarching question of what precisely crowdsourcing ‘does’ for traditional policy-making processes. This question can be divided into two categories of sub-questions: the conceptual questions regarding the linkages between crowdsourcing, deliberation, and democracy (1 and 2 below); and the empirical questions pertinent to the design and implementation of crowdsourcing policy-making processes (questions 3-7).

1. What are the elements that make a crowdsourced process an instantiation of ‘deliberative democracy’?
2. What is mass deliberation? Do crowdsourcing platforms make deliberation possible on a mass scale?
3. What are the motivational factors that determine citizen participation in crowdsourced legislation?
4. What are the elements that support creative online problem solving?
5. What are the elements that support online deliberation?
6. How should we design and implement an (online) crowdsourced legislative process so that the process is meaningful for both participants and policy-makers?
7. What are the best methods to evaluate crowd-generated ideas and, generally, content?

In this report we focus on the first and second questions, which we address inductively on the basis of our empirical evidence in the Finnish experiment. Future work will explore the remaining questions. The rest of the chapter is structured as follows: First, we introduce the methods and data. Then we discuss the findings, and finally, we conclude by considering the direction a future research agenda might take.

7.2.1. Methods and data

The authors participated in the design and planning of the crowdsourcing platform as leaders and advisors, thus applying the approach of action research. In action research, the field is not something to be observed; rather, the researcher is active in interacting, producing, and creating the research site (Gustavsen, 2001; Ladkin, 2004). Once the crowdsourced process began, the researchers took the role of participant observers; one of the authors also moderated the online process, in conjunction with two other moderators. The participatory role of the researchers helped to build rapport with interviewees, as well as to gain insight into the process.

We used a mixed method approach in our data gathering and analysis. In data gathering, we utilized digital ethnography, interviews and an online survey. The methods are detailed in the following.

7.2.1.1. Digital ethnography

We used digital ethnography, also called netnography (Kozinets, 2002), to gather data from the online process. Ethnographic data collection began in January 2013 and continued through the end of the online process on 24th of June, 2013. Daily observations (30 min. to 1 hour per day) were collected in memos of the online platform proceedings, and one of the authors participated as a participant observer in the conversations on the platform. The results informed the understanding of the crowdsourced process and were applied in designing the interview outline and survey.

7.2.1.2. Interviews with key participants

For this study we interviewed online participants, civil servants, and politicians involved in the crowdsourcing process. A total of 16 participants were thus interviewed, and the interview length was on average 57 minutes. We also interviewed the Minister of Environment, the Vice President of the Committee for the Future (the head of the crowdsourcing project), experts in off-road traffic in the Ministry of Environment, and communication experts involved in the crowdsourcing process. Finally, we interviewed members of two interest groups (a land-owners' association and the Finnish Association for Nature Conversation) involved in off-road traffic matters. We interviewed the same informants (the ones who responded to the second interview request and we were able to reach for an interview) and also some new participants, in a second round at the end of the crowdsourcing process in June and July 2013. In total about 40 interviews were conducted.

For the interviews, we used a semi-structured interview outline, with questions focusing on motivations for participating in the process, the experience of participation itself, and expectations for the outcome. We analyzed the data following Strauss and Corbin's (1998) analytical coding system. In the first round, we used open coding, allowing key themes and patterns to emerge from the data and thus to guide further analysis, following the principles of grounded theory (Lindlof and Taylor, 2002, p. 214; Strauss and Corbin, 1998, p. 101). In the next coding round, we used axial coding to relate the emerging categories to subcategories (Saldana, 2009, p. 159; Strauss and Corbin, 1998, p. 123). Finally, we applied selective coding to integrate and synthesize the subcategories (Strauss and Corbin, 1998, p. 143) into four main categories:

1. Definitions of democracy;
2. Elements of deliberation;
3. Educational aspects in the crowdsourced law-making process;
4. Expectations of the impact of participation.

We use qualitative data analysis software in coding and wrote analytic memos to support the analysis. The findings are detailed in the following section.

7.2.1.3. Participant survey

An online survey was designed to gather demographic data from the participants and to measure the issue preferences of the online participants, perceptions of law-making process, the potential deliberative and educational aspects, self-efficacy, perceptions of the crowdsourced idea generation and expectations for the impact of crowdsourcing on the actual law-making process.

The survey was sent to 645 registered participants on the crowdsourcing platform. Of those recipients, 186 (about 30%) completed the survey. Based on the survey data, the participant profile is described in the following. The percentage in the description refers to the fraction of participants among the respondents who belong to the described group.

A typical participant in the idea generation process was a 35-54 years old (47%), or 55-64 years (21%) or 26-34 years old (21%) male (86%). He had completed high school (48%) and he had gone to vocational school for occupational education (26%) or had a matriculation-based post-secondary level education (21%).

One fifth (20%) of the participants had a Master's degree and 16% a degree from a University of Applied Sciences.) He works full time (65%), and is typically a managerial employee (27%) or an employee (23%) or an entrepreneur in farming or forestry (14%). He lives either in Southern (28%), Northern Finland (28%) or Western Finland (20%) in a rural area (45%) or in a suburb (30%).

He is typically active in civic life: in the past 5 years he has expressed his opinions online on discussion forums or newspapers' commenting sections (72%); volunteered in an organization or an association (51%); has signed a citizen's initiative online or a paper (48%); has contacted a municipal representative (41%) or a Member of the Finnish Parliament (32%); and/or has written an op-ed to a newspaper or another publication (34%).

When asked, what are the most important issues in off-road traffic and the law regulating it, the respondents supported the rights of landowners as the most important issue. After that, the next most important issue was protecting the nature from the impact of off-road traffic followed by the Saami people's rights. The least important issue was to establish more routes for off-road traffic, yet that issue had the highest standard deviation so the issue divided opinions among the respondents.

7.3. Findings

We will describe four findings generated by the analysis of both the content of the platform and the interviews conducted during the two phases of the experiment. These findings amount to an argument for the deliberative nature of the exchanges observed on the platform, an argument we pursue in the next section.

First, we found that participants indeed experienced their interactions on the platform as democratic in nature: their definition of democracy as 'having a say' generally matched their experience of what went occurred on the platform. Second, we found that

participants' perception of the value of the experiment was primarily procedural (e.g., making the process more inclusive, fair, 'democratic', etc.) rather than instrumental (e.g., having a concrete influence on policy outcomes), let alone specifically epistemic (producing a good law)—a perception that aligns with the procedural emphasis of the mainstream literature on deliberative democracy. Third, despite the perception (amongst participants) of a lack of convergence or consensus on the website, the process in fact generated overlapping definitions and diagnoses of problems with off-road traffic, as observed and analyzed by the authors. Fourth and finally, according to participants, the experiment did have certain educational effects.

The online participants perceived the crowdsourced experiment as democracy-enhancing. In many participants' views, it provided a welcome way for citizens to have a 'voice', to 'say what they have to say', to 'be heard', etc. This became particularly clear from the participants' interviews, which show that there is distrust of the established law-making system among citizens. For the online participants, the crowdsourced process seemed to be a way to be heard with regard to a policy-making issue of relevance to them.

This is in spite of the fact that most participants seemed deeply skeptical, sometimes even cynical about the likelihood that the ideas generated through the crowdsourced process would be integrated into the final law. The participants appreciated the possibility of participating in the law-making process, yet remained skeptical about whether they really could have an impact on the actual law. Perhaps as a result of their anticipated lack of influence, they did not seem to expect that the final law would be good or better than the current one in any clear sense. This fear seems to reflect the current alienation of citizens from policy-making, where citizens are on the periphery of democratic processes, rather than a belief in their own lack of expertise or ability to contribute to the generation of better laws.

To date, at least one democracy-enhancing virtue of the crowdsourced process thus essentially resides in its contribution to the increased legitimacy of law-making— insofar as crowdsourcing makes law-making more open and to a degree more transparent to the public, even if it turns out that the results are not expected to be notably better than those under the existing system. At this stage, it remains an open question whether an expectation of increased quality of legislative performance would come to be seen as integral to the legitimacy of the process. Another question is how the participants would come to appreciate this increased performance, assuming it was real.

The crowdsourced experiment was not perceived by participants as consensus-inducing or preference-transforming, though participants generally were perceived as respectful, civil, and constructive. As researchers, however, we observed something slightly different happening on the site: a convergence of views on the diagnosis of some obvious problems in the first phase. Emerging from the analyses of the conversations and deliberative exchanges observed on the online forum, we observed several areas of potential convergence among participants, including the following areas:

Snowmobilers have a right to ride somewhere. This right, however, cannot be an absolute, unregulated right, and it cannot come at no cost to the snowmobile riders and at the exclusive cost of the landowners, neighbors, and nature;

Externalities of current snowmobile riding and the risk of accidents for snowmobilers must be addressed, for instance either by increased monitoring or by increasing the number of legal routes;

There is a problem with the way legislation on this matter has been produced thus far, because of biases towards either snowmobile riders, environmentalists or land-owners;

The crowdsourcing process is welcome in that it makes the possibility of shaping the law more real; however, many worry that some groups are not sufficiently represented: e.g., neighbors of the snowmobile roads, who only realize the noise pollution after it is too late; indigenous people (the Sami); and non-internet users, in general.

Participants perceived the experiment as educational. They reported learning about views and new information. The crowdsourced process thus also functioned as a way to gather information about the subject matter at hand, as illustrated in the following excerpt from an online participant (5):

I'm somewhat surprised to see that the online process serves as a way to add to the participants' knowledgebase and to correct their incorrect perceptions. I had read carefully the current law and the expired bill, and I realized that quite a number of participants didn't have the correct understanding of the terms of the law and its implementation. The concepts of snowmobile route, snowmobile track, and officialization of routes were misunderstood; as were the facts about the procedures of who makes decisions about new routes, whether the decision is made by an official, local government body or a land owner; as well as the information about who pays for the routes and their maintenance and where it is illegal to ride snowmobiles under the existing regulation. And in many other things there were misperceptions.

But, in many conversation threads, these misconceptions seemed to transform into correct ones, when somebody corrected the false information and explained where to find correct information. I feel it is very important to correct false information and beliefs because that greatly affects how the conversation proceeds. (Online participant, male)

Learning occurred in the interactions on the platform. The participants learned from each other and from the materials on the website. A learning moment is illustrated in the following sequence in the online conversations in Figures 12 and 13.

7.4. Crowdsourcing as distributed deliberation

The crowdsourcing process was mainly designed for idea and information gathering, yet we observed that deliberation occurred in the process, despite the lack of structural incentives for it. This phenomenon of ‘spontaneous deliberation’ occurring within contexts not designed for it has been observed elsewhere, for example within interest groups (Mansbridge, 1992), in the public at large (Habermas, 1989), or in international negotiations (Risse, 2000). Similarly, the crowdsourcing platform was not advertised as a deliberative one. Deliberation, as well as consensus building, started to occur spontaneously, particularly towards the end of the process. This spontaneous deliberation was in turn probably reinforced by the effects of moderation, which was increased at this point and started to encourage it explicitly. To cite one instance in which the participants started to engage in organic deliberation, we present below an interview excerpt from an online participant, who describes his transformational process during crowdsourcing (6):

I didn't propose any ideas in the first phase, but I read the others' ideas and commented and voted on those. I felt like there were so many views out there already. But towards the end of the second phase I realized not all my ideas were proposed by others, so now I have submitted many ideas [of my own]. In my ideas, I want to synthesize many views and build compromise, because I think those ideas are the most likely to succeed and make it into the law. (Online participant, male)

Even though the participants were mainly focused on producing their own ideas rather than building on each others' ideas, there was an increasing tendency towards collaborative, deliberative problem-solving.

Based on our analysis of the platform and interviews, we can report that the process exposed people to dissenting views and arguments that they previously had not considered. The crowdsourcing process thus minimally qualifies as a good locus for ‘cross-cutting exposure’ of the kind recently studied by empirical deliberative democrats (Mutz, 2006). Thus, even without the elements of collaborative problem-solving, elements of deliberation were visible on the crowdsourcing platform. The participants exchanged arguments and listened to each others' views in order to oppose or support them.

We thus propose that the platform first allowed for ‘deliberation within’ by exposing people to dissenting views and then inviting them to consider or reconstruct possible arguments for these dissenting views through a common psychological process that consists in trying to make sense or rationalizing views that might seem strange or wrong. We further surmise that the reason why people started to engage in ‘deliberation within’ instead of flat out rejecting the views is because of the level of respect and civility maintained on the platform, which fostered a spirit of trust and understanding.

The crowdsourcing platform qualifies as a good locus not just for ‘cross-cutting exposure’ but also for the kind of cross-cutting exposure that actually entails reasoned consideration for dissenting views. To the extent that the crowdsourcing moment is understood as part of a larger legislative process, it can be seen as an element of the conversation among the public, civil servants, and legislators. In that sense, the exchanges on the platform further qualify as elements of a ‘distributed’ form of deliberation (Goodin, 2005) taking place at a systemic level and involving different groups: the civil servants in charge of writing the law, the elected representatives of the public (the members of parliament) in charge of approving it, and, through the crowdsourced moment, an additional group of active participants giving a voice to the most intensely affected by the problem at hand (for the emphasis on ‘deliberative systems’, see also Parkinson and Mansbridge, 2012).

Considering the crowdsourcing platform and moment as a locus and sequence in a larger system of distributed deliberation is an important theoretical move, which presents several advantages. One is to render the objection concerning the lack of statistical representativeness of the platform’s participants rather moot. Yes, the group of participants has no claim to representing the larger public in any meaningful statistical sense. The participation generated by the crowdsourcing platform is definitely skewed in favor of a certain type of citizens. For instance, our results show that the participants are mostly male.

But this objection from statistical representativeness is a bit of a red-herring, in at least three ways. First, notice that civil servants and elected representatives fail to statistically represent the larger public, as well (elections do not ensure descriptive representation). To the extent that civil servants and elected representatives are considered representative in some other sense, it is because they derive their legitimacy, at least in part, from an authorizing procedure (direct election as a proxy for explicit consent in the case of representatives; democratic delegation derivative of consent through elections for the civil servants). Similarly, one could argue that—because the crowdsourcing platform was authorized by legitimate procedures (a legitimate government’s approval)—the participants were thereby also authorized to represent the broader public in some way, albeit not in a statistical sense.

Second, even if the question of statistical representativeness is central to the legitimacy of processes, one could argue that it is a norm that should in fact apply at the systemic level, not necessarily at the local one; or that it should apply to institutions aiming to represent the whole country (such as the legislature), not to those aiming, more modestly, at gathering and injecting new ideas into a legislative process that has gone notoriously stale.

Finally, recall also that in classical deliberative settings, participation is based on self-selection. Although all are included, not all speak. Similarly here, although all are invited, only a few choose to join. The important thing from a democratic point of view is that everyone has, in theory, an equal opportunity to say something and to be heard.

The crowdsourcing platform should not be seen as a substitute for other deliberative forums, where all problem solving and law generating should occur. It should be seen, instead, as an element or a sequence in a larger deliberative system. The function of this particular element is to inject new ideas that otherwise would not be generated or

seriously considered in the law-making process (especially not, we believe, in the world of parliamentary committees where, at least in Finland, most of the law writing currently takes place among unelected civil servants).

Finally, we propose that the deliberation generated on the crowdsourcing platform should not count as an instance of 'mass deliberation' or 'deliberation on a mass-scale'. Crowdsourcing experiments typically do not generate mass participation. In known experiments, crowdsourcing seems to generate participation in a range of no more than 1-3% of the concerned population (see, e.g., the Calgary and Icelandic cases). Compared with election and referenda turnout, these numbers are far from massive. Perhaps the benchmark should not necessarily be participation in mass elections. It should be, rather, the current number of people involved in the legislative process, which is much lower. In the case of the off-road traffic law, the rejected proposal involved at best a handful of civil servants and selected interest group representatives. In the crowdsourced process, the number of participants increased to hundreds, most of whom are excluded from the traditional law-making process. That said, deliberation on a mass scale means deliberation involving between thousands and millions of people, not just a few hundreds, let alone a few dozens. At 700 people or so, we thus consider that the deliberation occurring on the crowdsourcing platform in the Finnish experiment is better seen as a sequence in distributed deliberation rather than a case of mass-deliberation. We are skeptical that the latter can ever occur in a non-distributed form.

7.5. Conclusions

Our claim is that the observed interactions among participants in the crowdsourced platform qualify as deliberation, albeit of a more minimal kind than deliberative democrats would hope, in that the interactions did not lead to a change of opinions on a mass-scale or to any particular convergence, let alone to fully rational consensus. Nonetheless, the exchange of arguments observed ranged from deliberation of a minimal kind, as in cross-cutting exposure leading to 'internal deliberation', all the way to deliberation that reportedly enlightened, convinced, and brought certain divergent viewpoints closer together. Furthermore, some participants reported that the crowdsourced process had impacted their views in the sense that they learned to understand other parties' opinions, which is an effect we would expect from at least a minimal form of deliberation. Additionally, some participants perceived that their opinions changed during the process.

As of now, we see the deliberation taking place on the crowdsourcing platform as preparatory and supplementary for a more structured and decision-oriented deliberation among government officials, although there is no telling how far the experiment could go. With the right incentives, more time, and certain design tweaks, the platform would probably be able to generate deliberation of a greater depth. For now, we think that deliberation among the crowd can be legitimately seen as usefully preparatory for and supplementary to deliberation among government officials in that it offers one more data point about the opinions of a part of the public that has intense preferences about the issue at stake and is thus relatively well-informed. More importantly, crowdsourcing expands the possibility for gathering new ideas and solutions from distant knowledge

fields, which can enrich expert debate. It is a way, to put it differently, to preserve or reintroduce cognitive diversity in deliberation and problem-solving. Finally, crowdsourcing seems to have the additional virtue of educating participants, an activity characteristic of what both deliberative and participatory democrats expect of public discussion. For all these reasons, we conclude that the exchanges rendered possible by the Finnish crowdsourcing experiment seem to qualify as both democratic and deliberative.

8. Research findings: Evaluation results

In this chapter we describe the crowd-based idea evaluation process, the evaluator profile and the evaluation results.

8.1. Participant profile in the evaluation process

Preceding the evaluation on CrowdConsensus/Joukkoarvio (www.joukkoarvio.com), the respondents were asked to complete an entrance survey. The survey was designed to gather demographic information about the respondents and their issue preferences and to map if they participated in earlier stages of the crowdsourcing process. After completing the survey the respondents received an invitation to the evaluation tool in email.

The survey was completed by 749 respondents. Most of the respondents (78%) had not participated in the idea crowdsourcing in the Spring 2013. Of the 749 respondents, who completed the survey and received an invitation to the evaluation tool, 307 completed the idea evaluation tasks. Among those who completed the idea evaluation tasks, the distribution of the previous participation changes. Of these 307 respondents, 42% had participated in idea crowdsourcing and 58% had not.

The other notable difference between these groups is in issue preferences (specifically, when asked what is the most important issue or what is the group whose rights and benefits are the most important in off-road traffic law reform). For the survey respondent crowd, the most important groups (specifically, when asked what is the most important issue or what is the group whose rights and benefits are the most important in off-road traffic law reform) were recreational snowmobile riders (34%) and landowners (31%), followed by the natural environment (13%). Among the idea evaluators, the recreational snowmobile riders (42%) was the most prominent group by a wider margin, followed by landowners (26%) and the natural environment (12%) and professional users of off-road traffic vehicles (5%) and tourism and traveling entrepreneurs (4%).

Most of the idea evaluators were 35-54 years (42%) or 26-34 year old (36%) males (92%). A typical evaluator lives in Northern Finland (47%), Southern Finland (19%) or Western Finland (17%) in rural area (35%) or in a suburb (28%). He has completed primary school (52%) or high school (42%), and he has gone to vocational school for occupational education (25%) or has a matriculation-based post-secondary level education (24%). 18% had a degree from a University of Applied Sciences and 11% Master's Degree from university. Typically, he is an employee (37%) or a managerial employee (17%) and working full time (77%).

He is typically pretty active in civic life: he has voted in either local or national elections in the past 5 years (82%), he has expressed his opinions online on discussion forums or newspapers' commenting sections (64%); has signed a citizen's initiative online or a paper (48%), volunteered in an organization or an association (36%), has contacted a municipality representative (24%) and/or has written an op-ed to a newspaper or another publication (22%).

One of the main differences between the idea generators (the idea generator profile is detailed in chapter 6.2.1.3.) and the evaluators is their geographic location. The evaluators typically live in Northern Finland (47%) whereas an idea generator typically lives in Southern (28%) or Northern Finland (28%).

Another interesting difference is a difference in age groups. The idea generators were distributed to three main groups: 26-34 years (21%), 35-54 years (47%) and 55-64 years (21%) old. The fourth, a considerably smaller group was 65 years old or over (10%). The idea evaluators, instead, were distributed into two main groups: 26-34 years (36%) and 35-54 years (42%) old. The third largest group was 18-25 years old (9%) and the fourth one 55-64 years (7%). The fraction of 65 years old or over had shrunk to 3%. This means that the idea evaluators were somewhat younger than the idea generators.

8.2. Most important issues

In the beginning of the crowd evaluation platform, each participants was first asked the question, "What are the most important issues in off-road traffic?," and offered a choice of 11 answers on the crowd evaluation platform, participants gave the following ranking (based on Copeland scores), also illustrated in the Appendix 2, <http://bit.ly/197CenL> : Proposal Statistics by topic.

1. Increasing the possibilities to ride off-road traffic vehicles in Finland.
2. Improving safety in off-road traffic.
3. Regulating about route setting practices
4. Enabling the professional use of off-road traffic, such as in reindeer husbandry and fishing.
5. Developing the preparatory process of off-road traffic law process.
6. Off-road traffic law and other laws. Regulation off-road traffic in other laws
7. Regulating about snowmobile route impact evaluations.
8. Decreasing the harm of off-road traffic to natural environment and to neighbors.
9. Decreasing illegal riding in off-road traffic.
10. Landowners' rights to restrict and prevent off-road traffic on their land.
11. Financial compensation to landowners for off-road traffic on their land.

The results clearly reflect a main concern for increased possibility for off-road traffic, but also, immediately after safety. Environmental concerns, reduction of illegal riding, and land-owners' rights and financial compensation came in, however, last. Interestingly,

when asked what they thought other people would rank as the highest priorities, the ranking is almost reversed (except for safety, which remains a top actual and predicted priority). In predicted priorities, land-owners' rights and compensation as well as harm to nature are ranked first. Increasing the possibilities to ride off-road traffic in Finland however is demoted to rank 8. This striking reversal possibly reflects the perception by the participants (many snowmobilers) that their concerns, though in fact dominant on our platform, were not going to be heard, as well as their wrong perception that too much attention would be paid to land-owners' rights and the environment. The ranking resulting from the predictions was the following:

1. Improving safety in off-road traffic.
2. Decreasing illegal off-road traffic.
3. Financial compensation to landowners for off-road traffic on their land.
4. Landowners' rights to restrict and prevent off-road traffic on their land.
5. Regulating the harm of off-road traffic to natural environment and to neighbors
6. Enabling the professional use of off-road traffic, such as in reindeer husbandry and fishing
7. Developing the preparatory process of off-road traffic law process
8. Regulating snowmobile route and trail setting practices.
9. Increasing the possibilities to ride off-road traffic vehicles in Finland.
10. Regulating about route impact evaluations
11. Off-road traffic law and other laws. Regulating off-road traffic in other laws.

8.3. Ranking of the top ideas across all questions

After the participants had evaluated the ideas by scoring, ranking and comparisons, we analyzed the top proposals based on mean, median, Borda Score, and Copeland score. The standard deviation was also calculated as a measure of overall consensus or lack thereof. In the following, we report on the median scores, which also correspond to Condorcet winners or high Copeland scores. We chose the median as the expository criterion because it is intuitive, allows comparisons across categories, and because recent research in social choice theory supports majority judgment, of which the median is an expression, over other evaluation methods (Balinski and Lariki, 2010). We further ordered ideas with similar median scores according to their mean (ideas that come up first have higher mean rating). Generally speaking, most of the scores were convergent (a 5-star rating corresponded to a Condorcet winner or a very high Copeland score) so there are only a few cases where ideas received a high rating yet did not score high on the Copeland or

Borda scale. Further evaluation and analysis of the data will be necessary to explain these cases. We simply have reported in brackets the local inconsistencies for now.

In order to get a sense of the results, we start by presenting the 5-star idea. As becomes apparent, there is a clear sense in which the “best” ideas support more freedom to ride snowmobiles around Finland, specifically in Lapland. Great support for the Swedish law model also emerges. (The idea was mentioned several times, in various guises, and several versions came out on top). It thus seems that, at least for this crowd, a modified version of the Swedish law would be the desired outcome. Of course, most likely, the participants can refer to only certain aspects in the Swedish law, such as more freedom to ride snowmobiles, but not take into account that the law actually has restrictions too.

The ideas with the highest median—that is, a rating of 5 stars (ordered according to mean) were:

1. [603]: The Swedish model should be followed: there should be more freedom to ride snowmobiles off established routes and trails
2. [142]: Lapland, the Northern part of Finland should have more areas reserved for free, unrestricted driving than other parts in Finland because there is so much undeveloped land
3. [348]: More routes for off-road traffic should be established, so that there is less need for illegal riding
4. 268: Off-road traffic from home to routes should be made legal (this idea has a Copeland score of 0 though)
5. 271: Residents in sparsely populated areas of Lapland and Northern Finland should be allowed to ride snowmobiles off routes because in these areas snowmobiles are used as means of transportation. In order to use snowmobile as a means for daily commute, it is claimed that residents in Northern Finland cannot stay on routes or trails because there is not enough of these; and also the need for mobility on snowmobiles is constantly changing
6. 265: In addition to official routes, there should be areas that are designated for a free snowmobile riding areas. In these “free-riding zones” for snowmobile riding, riding is not limited to designated routes.
7. 300: The law reform should be inspired by the Swedish law that is generally considered more permissive than the current Finnish law.
8. 610 The granting of permits for riding along power lines should be simplified.
9. 140 When deciding the location of routes, landowners can indicate which areas they don't want to be used.
10. 131: Middle-size power lines and large power lines and the sides of fields for agricultural use should be free to use for off-road traffic.

11. 269: Transfer to routes via private land using existing trails (power lines, open swamp areas etc.) and roads used by other vehicles should be legalized. The offender should pay for any harm he or she causes. If the offense is grave, offenders could be fined (Copeland score of .5 only)

12. 325: If established snowmobile routes are opened for ATVs for summer use, the routes for summer use should be evaluated on a case-by-case basis. This means that each route should be evaluated independently and whether it can be used in the summertime as well. The impacts of the summer use of the route have to be evaluated separately.

13. 144: The Swedish model for off-road traffic should be applied at least to Lapland

14. 602: Professional use of off-road vehicles (snowmobiles and ATVs) like reindeer husbandry and professional fishery should remain permitted off routes and trails.

15. 267: Snowmobiles should be allowed to use roads and shoulders for off-route traffic to connect between routes or trails.

16. 270 Free riding areas like in Sweden should be created for routeless snowmobile riding for everybody.

17. 261 The blood alcohol limit for snowmobile should be the same as for other motorized vehicles.

18. 246 Land-owners should be encouraged to indicate which areas they don't want to be used on their property.

If we now turn, for the sake of contrast, to the least popular ideas (we are considering the last 11 among the ideas rating at 1 star), we find consistently symmetrical results reflecting a strong "libertarian" desire to have more opportunities for off-road traffic. Participants rejected the extreme ideas of a systematic ban on recreational snowmobiling. They also rejected the idea of government monitoring through GPS tracking or RFID stickers. They also rejected ideas that, on the face of it, are simplistic, extreme or outlandish: reducing the speed limit to 60km/h everywhere, allowing 9 year-olds to drive snowmobiles, creating a nature reserve every time an endangered species is found on a planned trail, or never compensating landowners for the use of their land for off-road traffic. The rejected ideas, in our view, reflect both a libertarian ethos that favors snowmobiles and a rather accurate assessment of the worst ideas, that is ideas that are fairly obviously "bad".

141: If endangered species and other wildlife are discovered when a route or a trail is planned, then a private nature reserve should be created.

288: A license plate, which would be a sticker glued to the front cover glass of a snowmobile, should be made mandatory

294: The equipment of law violators and offenders should be confiscated.

285: More police force should be deployed to monitor off-road traffic

117: There should be no routes on private land but instead all routes should be located on state-owned land

282: GPS-tracking of vehicles should be used to monitor traffic and identity of illegal riders

255: The speed limit for snowmobiling should be set at 60km/h in all areas

317: In order to reduce noise, there should be payment waivers for light snowmobiles with small motors that travel at lower speed.

252: The age requirement for riding off-road vehicles should be changed to 9 years.

237: Landowners shouldn't be compensated at all if a route or a trail crosses their property.

240: An off-road traffic driver's license should have the same requirements as motorcycle license

Predictably, both the highest ranked and lowest rank idea proposals had low standard deviation, indicating wide consensus among the participants. The mean, Borda scores, and Copeland scores also tended to be aligned. Things become more complicated and interesting, to a degree, when we turn to ideas with a rating. Let us for now consider the ideas that received a rating of 4 stars. Here it becomes necessary to introduce a secondary, lexical criterion to rank order the various 4-star ideas. We use the Copeland score, reporting only 4 star ideas that also happen to be Condorcet winners (they defeat all other ideas in a pairwise comparison). Here the ideas seem to correspond to less consensual yet more nuanced and complex proposals, emphasizing decentralized governance where possible, the preservation of good ideas in the existing law (keeping the 15 year-old limit of age for riding snowmobiles), and commonsensical ideas (e.g., the proposal for allowing snowmobilers to go around obstacles whenever a route or trail does not exist to do so). More attention is also paid to landowners' rights: proposals suggest that while their consent can be trumped for the sake of public utility, a condition of "no harm" to their land must be met. They are granted the right to ban repeat offenders from their land. Compensation for harm is considered necessary and laid squarely on the shoulders of the offenders (rather than responsible authorities).

121: There should be more routes in the Eastern and Northern parts of Finland

587: Going around obstacles on a route should be allowed even if there is no existing route or trail to do so. The current law states that obstacles must be passed via existing routes. This forces riders to make long detours, causing delays and extra-kilometers.

259: Landowners should be authorized to ban repeating off-road traffic regulation offenders from their property.

250: The age requirement for riding off-road vehicles should be kept at 15 years.

170: Route and trail maintenance should be organized so that a usage fee for riding on routes and trails inside a municipality is collected. The income from the fee should be used to maintain and develop routes and trails.

223: Multiple factors such as land quality, agriculture, farming and forestry should be taken into account in order to fairly calculate the amount of compensation owed to the landowners.

134: Small roads meant for tractors in the summer should be opened for snowmobiles in the winter.

296: Any harm caused should be compensated by the offender and if the offense is grave, they should be fined.

125 Regulation about new routes should be different for those routes that are located on private land and different to those, that are located in state owned land.

183: Decision-makers of new routes should vary depending on whether the route is a small local connection or part of the national network. The local authority (municipality) would decide on local routes and a county or a national authority about wider route networks.

248 Snowmobile owners should be encouraged to join their local snowmobile clubs to receive training and information about off-road traffic safety.

150 It should be possible to establish a route on private property without the landowner's consent but only when this does not cause harm to the landowner.

592: Impact evaluations should include proposals on how the routes could bypass sensitive wildlife areas

338: Vehicles used in forestry or other business-related activities should be left outside of the off-road traffic legislation.

184: If the municipalities remain the authority responsible for approving new routes, they should be obliged to gather basic information on off-road traffic and to monitor off-road traffic.

163: The route plan should include a description of use and the landowner should have a right to demand an update to the route plan to correspond to the present situation or closing of the route.

All in all, it is clear that the domination of the 5-star ideas across categories reflects the priorities of the participants in the crowdsourcing platform (essentially those that support snowmobilers and landowners rights, or those of like-minded). That is why it is necessary to look more finely at the results per question.

8.4. Top ideas per category

There were 11 categories in total:

- 1) Location of routes
- 2) Establishing new routes
- 3) Choice of the responsible authorities for deciding on new routes
- 4) Route setting procedures
- 5) Route impact evaluations
- 6) Financial compensation for landowners
- 7) Safety
- 8) Illegal riding
- 9) Preparatory process
- 10) Regulation of harm to nature, environment, and neighbors
- 11) Off-road traffic and other laws

In order to identify the most promising ideas per category, we now rely on the median scores of the ideas (since the Copeland scores were not calculated per category and do not lend themselves easily to such a comparison).

1) Location of routes

No idea received a 5-star rating, so we list all the ideas that got at least a median rating of 3.5 stars. From most liked to least liked (in the range of 4 stars to 3.5 stars), we find:

610: The granting of permits for riding along powerlines should be simplified.

131: Middle-sized powerlines and large powerlines and the sides of fields for agricultural use should be free to use for off-road traffic.

114: The Swedish model for off-road traffic should be applied at least to Lapland.

602: Professional use of off-road traffic vehicles (snowmobiles and ATV's) like reindeer husbandry and professional fishery, should remain permitted off routes and trails.

128: Given that existing powerlines and the sides of fields for agricultural use would be used by off-road traffic, landowners should mark Christmas tree fields so that they do not get destroyed by traffic.

603: The Swedish model should be followed: there should be more freedom to ride snowmobiles off established routes and trails.

142: Lapland, the Northern part of Finland, should have more areas reserved for free, unrestricted driving than other parts in Finland because there's so much undeveloped land.

134: Small roads meant for tractors in the summer should be opened for snowmobiles in the winter.

127: New routes should be established along power grid lines. Trees are typically cut in these areas so they are good places to ride.

147: When deciding on off-road traffic regulations for Lapland in particular, a larger number of affected parties should be consulted. These parties include officials of Northern municipalities, especially Kittilä, the Finnish Forest and Park Service, and snowmobile clubs.

140: When deciding the location of routes, landowners can indicate which areas they don't want to be used.

132: New routes should be established based on existing routes even if they are at the moment classified as illegal.

126: Regarding state-owned property, the criteria should be different for routes in nature reserves and other areas.

130: Short ring routes should be established around hydro-electric power plants. This would help create a nationwide body route network (runkoreittiverkosto) that utilizes existing power lines and reservoirs of large rivers.

139: When a route is planned, landowners should be encouraged to indicate which areas they don't want to be used on their property.

121: There should be more routes in the Eastern and Northern parts of Finland.

125: The criteria for new routes should be different for routes that are on privately-owned property than for routes on state-owned property.

135: Routes should respect a certain minimum distance to gardens, cowsheds and houses.

By contrast, the ideas with median rating of 2 stars or fewer included the following, from least disliked to most disliked:

133: The location of routes should be determined based on GPS-acquired data.

141: If endangered species and other wildlife are discovered when a route or a trail is planned, then a private nature reserve should be created.

136: Untouched nature and wilderness should not be used for off-road traffic.

117: There should be no routes on private land but instead all routes should be located on state-owned land.

599: Off-road traffic should be allowed only for professional use, not for leisure.

2) Establishing new routes

Ideas above the 3.5 median rating were:

173: Route and trail maintenance should be organized so that at least in Southern Finland snowmobile riding clubs and the municipalities co-operate in order to lower maintenance costs.

172: Route and trail maintenance responsibilities should be defined in the route planning phase.

171: Route and trail maintenance should be organized so that the law defines whose responsibility it is to take care of the thicket growing on route sides.

170: Route and trail maintenance should be organized so that a usage fee for riding on routes and trails inside a municipality is collected. The income from the fee should be used to maintain and develop routes and trails.

150: It should be possible to establish a route on private property without the landowner's consent but only when this does not cause harm to the landowner.

169: The validity of the permit criteria for a route should be regularly verified to check if they still make sense and if the route still fulfills the criteria.

163: The route plan should include a description of use and the landowner should have a right to demand an update to the route plan to correspond to the present situation or the closing of the route.

162: If the route does not follow the description of use that was approved in the planning phase, the landowner should have a right to demand updating the route plan to correspond to the present situation and the closing of the route.

152: There should be more strict and clear criteria in the existing law for justifying bypassing landowners' consent when establishing a new route.

The worst ideas were, from the least disliked to the most disliked:

161: If a route permit has been granted but the feasibility of the route plan is not inspected on a yearly basis, the route permit should be annulled at the landowner's request.

164: If a route is misused, the landowner should have the right to close the route without advance notice.

160: If a route permit has been granted but the feasibility of the route plan is not inspected on a yearly basis, the route permit should be automatically annulled.

155: The state or any other public institution should not be obliged to accept routes on their land. They should be granted a veto right regarding planned routes on their land.

3) Choice of the responsible authorities for deciding on new routes

Here we follow the Copeland score arranged by median rating as all median ratings are flat and low (around 3 stars). Top choices were:

183: Decision-makers of new routes should vary depending on whether the route is a small local connection or part of the national network. The local authority (municipality) would decide on local routes and a county or national authority on wider route networks.

184: If the municipalities remain the authorities responsible for approving new routes, they should be obliged to gather basic information on off-road traffic and to monitor off-road traffic.

188: All complaints about issues related to off-road traffic law should be processed by the same administrative court (in the city of Vaasa in Finland), which already deals with environmental and water permit complaints.

187: Complaint procedures concerning routes should be more explicitly included in the off-road traffic law.

Least popular ideas:

182: No-go areas for off-road traffic should be decided upon either by the Ministry of the Environment or the Finnish Environment Institute (SKYKE)

189: The right to complain about routes for off-road traffic should be extended to include more stakeholders, such as landowners, practitioners, guardians of the common good and environmental organizations. The Ministry of the Environment, ELY Centers and Metsähallitus' nature services should also have the right to complain.

4) Route setting procedures

Many ideas had a median rating over 3.5 stars here. Strikingly, they all emphasize early warning, publicity, transparency, and openness as central desiderata associated with route setting procedures.

196: When planning, renewing or building an off-road traffic route on private property, all affected parties should be contacted by personal mail or other means.

191: Criteria for route permits for new routes and related impact evaluations should be made public and published online.

194: Any plans for new routes should be communicated locally early and widely, even before a landowner meeting is scheduled. This could be done through newspaper announcements, so that locals have a chance to familiarize themselves with the plans and the anticipated consequences of the planned routes.

195: The route plan should be made accessible to the public at least 30 days before decisions are made. This regulation is currently part of the Outdoor Recreation Act in Finland.

190: All hearings and decisions about route plans and route-setting procedures should be announced online and in the local newspapers.

201: A route plan should include a description of the anticipated route usage.

199: When applying for a new route, the applicant should present an extensive route plan.

202: Route plans should have to be made for ice-covered grounds if those are part of a route.

Two ideas were clearly the least favorites: one making third parties involved in a two-way agreement between a landowner and a snowmobiler, and the other involving apparently very unpopular environmental experts in route planning activities and events.

193: Neighbors should be invited to route planning events, even if the route or trail is established based on a two-way agreement between the landowner and the snowmobiler.

192: Environmental experts (e.g., environmental associations) should be involved in route planning activities and events.

5) Route impact evaluations

Only three ideas here have a median rating of 3.5 or higher:

597: Impact evaluations should include alternative locations for the planned route.

592: Impact evaluations should include proposals on how the routes could bypass sensitive wildlife areas.

594: Impact evaluations should cover the full-life span of a route, i.e. the construction, the period during which the route is in use, and the period after the route is no longer in use.

The least liked ideas reflect the low priority of environmental concerns for the crowd as well as the absolute rejection of the idea of using GPS data, which would allow close monitoring of the snowmobilers.

588: Impact evaluations should include an estimate of the impact of the route on endangered species.

590: Impact evaluations should include an estimate of the impact of the route on water pollution and noise levels.

598: Existing GPS-tracking data of snowmobile traffic should be used when drafting the impact evaluation. The data could be used to verify the amount of traffic and to estimate the impact.

6) Financial compensation for landowners

Three ideas have a clear median rating above 3.5 stars. They strike us as fair and nuanced.

229: Financial compensation should be given to private landowners, but the use of existing state-owned routes should remain free of charge

224: The amount of compensation for landowners should be calculated separately for summer and winter periods.

223: Multiple factors, such as land quality, agriculture, farming and forestry, should be taken into account in order to fairly calculate the amount of compensation owed to landowners.

The least favored ideas by contrast are either unjust or arbitrary.

227: Compensation for landowners should be 1 euro per 1 meter. A snowmobile club would collect the payments from its members and pass them on to landowners. For example, 1 km of snowmobile trail would require 1000 euros, which would be divided by the number of members in the snowmobile clubs.

237: Landowners shouldn't be compensated at all if a route or trail crosses their property.

7) Safety

Many good ideas seem to have been generated on this issue, as we have a lot of ideas above the 3.5 median rating. The most striking idea here is probably the idea of "free-riding zones" where snowmobilers could have fun without restrictions. Another striking set of ideas have to do with the centrality of local snowmobile clubs as sources of information, education, and discipline for the members.

261: The blood alcohol limit for snowmobiles should be the same as for other motorized vehicles.

265: In addition to official routes, there should be areas that are designated for "free snowmobile riding." In these "free-riding zones" for snowmobile riding, riding is not limited to designated routes.

246: Snowmobile owners should be encouraged to join their local snowmobile club to be informed about areas that allow snowmobile riding.

248: Snowmobile owners should be encouraged to join their local snowmobile club. The police and other officials could use this communication channel to reach all members.

260: A zero alcohol tolerance should be set for off-road traffic. [This idea is not consistent with the top one, though, and has no Copeland score so it's not clear it is as popular as it sounds according to the median rating. More research is needed to clarify this point]

259: Landowners should be authorized to ban repeat off-road traffic law regulation offenders from their property.

247: Snowmobile owners should be encouraged to join their local snowmobile club to be informed about new regulations and restrictions in riding areas by, for instance, a group text-messaging system.

250: The age requirement for riding off-road vehicles should be kept at 15 years.

The least favored ideas reject GPS-tracking, RFID stickers, a reduced age requirement (to 9 years), and other measures seen as overly constraining or extreme.

256: GPS-tracking systems should be added to all vehicles so that vehicles can be located when needed and risky areas can be mapped.

238: A specific off-road traffic driver's license should be created.

240: An off-road traffic driver's license should have the same requirements as a motorcycle license.

255: The speed limit for snowmobiling should be set at 60 km/h in all areas.

257: RFID stickers should be added to all vehicles.

263: Only snowmobiles with a roller width of at least 50 cms and/or length of 390 cms should be allowed. The minimum length for a narrow roller should be 4 meters. These wider snowmobiles better remain on the snow surface.

252: The age requirement for riding off-road vehicles should be changed to 9 years.

8) Illegal riding

Here too, many ideas were in the top range of 3.5 median rating or above, some emphasizing common sense reform (making connections from home to routes legal, allowing for going around obstacles, giving more freedom to people from remote areas for whom snowmobiling is the only available transportation mode), others inviting the imitation of the Swedish law (free riding zones), and still others suggesting special permits for tourists to use the fun free-riding zones.

348: Off-route traffic from home to routes should be made legal.

267: Snowmobiles should be allowed to use roads and shoulders for off-route traffic to connect between routes or trails.

348: More routes for off-road traffic should be established, so that there is less need for illegal riding.

270: Free riding areas like in Sweden should be created for routeless snowmobile riding for everybody.

271: Residents in sparsely populated areas of Lapland and Northern Finland should be allowed to ride snowmobiles off routes because in these areas, snowmobiles are used as a means of transportation.

269: Transfer to routes via private land using existing trails and roads used by other vehicles should be legalized.

273: Tourists in Lapland should be allowed to buy temporary permits to use “free riding zones.”

587: Going around obstacles on a route should be allowed even if there is no existing route or trail to do so.

296: Any harm caused should be compensated by the offender and if the offense is grave, they should be fined.

350: Landowners should have more flexibility to decide about off-road traffic on their land. They should be able to create free-riding zones and access. Clear pointers to indicate free-riding zones and no-go areas should be placed on digital maps. Landowners would only need to indicate to the local authority in which areas they prohibit snowmobile access and that information would be transferred to digital maps.

349: Landowners should be allowed to ride unregistered vehicles on their own land.

280: Parking areas for off-road traffic vehicles should be created near route starting points. At the moment there is a lack of parking areas near route starting points, and therefore off-road traffic route users have to ride illegally along regular roads to reach routes.

274: Free riding in Lapland should be allowed except in areas restricted due to farming needs, such as during reindeer breeding period.

281: There should be more clear signs on off-road traffic routes to indicate free-riding zones and no-go areas. Signs could be put in place either by landowners, snowmobile club associations or other authorized entities.

The least favorite ideas were very coercive, punitive, or obviously too “Big-brother” like in the eyes of the community, involving control and use of GPS data by the authorities:

287: Distance tracking (RFID, GPS) of all off-road vehicles should be used to monitor if usage fees for trails have been paid.

284: Snowmobiles should be required to have an individual chain marking to enable tracking illegal riding. The “chain marking” is a unique trace that a snowmobile’s chain leaves on snow. Thus illegal riders could be identified by identifying their traces.

294: The equipment of law violators and offenders should be confiscated.

282: GPS-tracking of vehicles should be used to monitor traffic and identify illegal riders.

9) Preparatory Process

Four ideas here came out on top. Aside from the strong preference expressed for the procedures of the Swedish law, the demands are for transparency, openness, and representation of all affected interests in the crowdsourcing process (which, interestingly, wasn't the case in this experiment).

300: The law reform should be inspired by the Swedish law that is generally considered more permissive than the current Finnish law.

304: All the minutes and other documents of the preparatory working group should be published online.

305: The preparatory working group should organize local hearings on the law reform.

308: When crowdsourcing a law reform using an online platform, the participants should represent all the relevant interests.

The least favorite idea, proposing a more restrictive law, was consistent with the most favorite idea, proposing a more permissive one:

301: The law reform should be inspired by the Norwegian law that is generally considered more restrictive than the current Finnish law.

10) Regulation of harm to nature, environment, and neighbors

Few ideas (out of a plethora) were rated above 3.5 stars. This may reflect the general dislike of environmental issues by this particular crowd, rather than the existence of really bad ideas. The preferred ideas emphasize planning, prevention, and education rather than regulation, taxation, deterrence, and punishment.

325: If established snowmobile routes are opened for ATVs for summer use, the routes for summer use should be evaluated on a case-by-case basis. This means that each route should be evaluated independently of whether it can be used in summer time as well. The impacts of the summer use of the route have to be evaluated separately.

330: Routes should go around small water areas and precious environmental and wildlife areas.

355: There should be more education of the younger generation about environmental ethics, so that they learn to respect nature more.

316: In order to reduce noise, off-road traffic routes should be far enough from residential areas.

The least liked ideas, consistently, emphasized taxation, regulation, or requiring that snowmobiles use electric engines.

327: The law should include restrictions for off-road traffic emission pollution.

321: Snowmobiles and ATVs should be taxed according to their noise level and gas emissions.

331: Vast forest areas should be kept free of human activities and reserved for wild life only.

354: Illegal hunting by using off-road traffic vehicles should be decreased by requiring the installation of a GPS tracking-system in off-road vehicles.

310: Snowmobiles should be powered by electricity. This would decrease the noise level.

11) Off-road traffic and other laws

None of the ideas here generated much enthusiasm. Perhaps this general category is less salient or other interesting to the participants. The highest rated idea, the Copeland winner, has a median rating just above 3 stars:

338: Vehicles used in forestry or other business-related activities should be left outside of the off-road traffic legislation.

The least liked idea was specific and technical:

337: Permits for off-road traffic competitions and practicing for competitions should be transferred to the Nature Conservation Act (1096/1996).

8.5. Top ideas per question

In the following we only consider a sample of questions. The reader is invited to consult the graphs in the Appendix 2 for further detail, <http://bit.ly/197CenL>.

Since there was almost always a clear Condorcet-winner per category, we use the Copeland score to report on a couple of top ideas per category, which also happen to have a median rating of at least 3 stars. We select a couple of examples from the mass of data because they strike us as telling or instructive in some way. An exhaustive analysis of the top ideas for all questions and categories would need to be performed to reach more substantive conclusions and would seem necessary to support the work of civil servants.

Location of routes. What would be the best way to arrange snowmobile riding in Lapland?

There is a clear Condorcet winner: “At least apply the Swedish model to Lapland.” A close second spells out the same idea . A third idea asks for involvement of “a larger number of affected interests,” including officials of Northern municipalities, the Finnish Forest and Park Service, and snowmobile clubs, in deciding on off-road traffic regulation in Lapland. The least popular idea actually rests on what is arguably a fallacious slippery-slope argument, that if you grant special rights to some users, it will water down the whole law. This is logically false and clearly the crowd wasn’t fooled.

144: The Swedish model for off-road traffic should be applied at least to Lapland.

142: Lapland, the northern part of Finland, should have more areas reserved for free, unrestricted driving than other parts in Finland because there’s so much undeveloped land.

147: When deciding on off-road traffic regulations for Lapland in particular, a larger number of affected parties should be consulted. These parties include officials of northern municipalities, especially Kittilä, the Finnish Forest and Park Service, and snowmobile clubs.

143: Riding off-road vehicles and ATV’s to fishing lakes in the northern, sparsely populated areas in Finland should be allowed. Otherwise fishing is impossible.

146: Residents in Lapland should have the right to ride freely inside their county. This means they should be allowed to ride off routes and trails.

145: Snowmobile riding in large national parks in Lapland should be allowed.

148: The off-road traffic law should not give some users (e.g., reindeer owners) special rights because these rights would water down the whole law.

Preparatory process. How could the preparatory process of the off-road traffic law reform be the best improved?

All first four ideas have a median rating close to 4 stars, which shows great support for those ideas. On the substance, a clear recommendation emerges. The Condorcet winner (4 start median rating) is the proposal that the new law should be inspired by the Swedish law’s permissiveness. A close second (also a 4 star median rating), on the procedure, there is a high desire for transparency and openness as well as public participation and consultation (3.75 median rating). Regarding the crowdsourcing part, there is an expressed desire of a participation that would reflect all the affected interests (3.75 median rating), which goes to show that even if our sample was biased, a majority of the participants was not necessarily happy about it, even though this bias would in theory

benefit them in terms of representing their interest and ideas better. This gives us hopes about the motivation of the participants who, however biased, do not seem to be animated by lobbyist concerns. Although of course if one is cynical, this could just be an empty declaration of interest. A feel good kind of answer. Another appreciated idea in the same vein (just above median 3 star) is the idea that a broad range of stakeholders for the actual-law writing process should be included in the preparatory working group for the actual writing-law process. What the results here tell us basically is that even though the crowd in our case rejects concerns for the environment, they still want environmentalists to be represented among the law-makers.

Among the least favored ideas, and this proves to be perfectly consistent, is the proposal to follow the Norwegian law, which is more restrictive than the Finnish one. There is also a clear rejection of SYKE experts as involved in the preparatory working group to provide information on environmental impact. Given that another disfavored idea has to do with environmental issues, it seems the rejection concerns the introduction of concern for the environment rather than the competence of SYKE experts per se, although both dimensions could be involved. Another unliked idea is adding more paperwork and paper regulations to read.

300: The law reform should be inspired by the Swedish law that is generally considered more permissive than the current Finnish law.

304: All the minutes and other documents of the preparatory working group should be published online.

305: The preparatory working group should organize local hearings on the law reform.

308: When crowdsourcing a law reform using an online platform, the participants should represent all the relevant interests. Crowdsourcing should not be a mere marketing trick but should have a genuine influence on the law.

302: A preparatory working group consisting of members representing a broad range of stakeholders for the actual law-writing process should be set up for the preparation of the off-road traffic law.

307: When the law reform is done, instruction booklets about the law-reform process and its implications should be written to increase compliance with the new law.

306: The preparatory working group should have resources to order investigations on, e.g., environmental issues.

303: SYKE experts (SYKE= Finnish Environmental Center) should participate in the preparatory working group to provide information on environmental impacts.

301: The law reform should be inspired by the Norwegian law that is generally considered more restrictive than the current Finnish law.

Regulation of harm to nature, environment and neighbors. How could the natural environment and wildlife be the best taken into account in the off-road traffic law?

Clear Condorcet-winner emphasizes case-by-case rather than blanket regulation. Second top idea (3.5 star, Copeland score over .8) emphasizes education of younger generations to the proper use of snowmobiles and respect for nature (consistent with later results on similar questions). Least popular idea is the monitoring of illegal hunting via mandatory installation of a GPS tracking device. Another unpopular idea is regulation of emission levels. Clearly concern for the environment is not seen as essential.

325: If established snowmobile routes are opened for ATV's for summer use, the routes for summer use should be evaluated on a case-by-case basis. This means that each route should be evaluated independently whether it can be used in summer time as well. The impacts of the summer use of the route have to be evaluated separately.

355: There should be more education of the younger generation about environmental ethics, so that they learn to respect nature more.

353: According to the "Swedish model," riding of snowmobiles with at least 50 cm wide and/or 390 cm long trail chain/rollers is allowed. Minimum length for a narrow roller/trail chain should be 4 meters.

324: The law should have sufficient criteria for preventing, mitigating and compensating harm.

323: A better or a more specific criterion than "considerable harm" should be defined in the law to refer to the harm off-road traffic causes to the natural environment.

326: The Ministry of Environment should conduct comparative research on other countries' restrictions in order to establish relevant limits for gasoline emissions in Finland.

327: The law should include restrictions for off-road traffic emission pollution.

354: Illegal hunting by using off-road vehicles should be decreased by requiring the installation of a GPS tracking system in off-road vehicles

Route impact evaluations. If the law regulated about the impact evaluation, how could the impact evaluation be arranged so that the financial aspect could be measured the best?

Interestingly in this case there is no Condorcet winner and all ideas have a similar median rating of about 3 stars. In truth the ideas are very similar and both commonsensical and vague enough to lend themselves to a non-enthusiastic support. From our point of view, the crowd evaluated these ideas fairly sensibly.

209: Impact evaluations should include a cost-benefit analysis for all parties involved (i.e., who benefits from the route and by how much, who is harmed and loses out because of it, and by how much).

208: Impact evaluations should include all the estimated financial pros and cons.

210: Impact evaluations should include an estimate of how many state funds will be used for the route and how much revenue the route will bring in return.

Safety. How to best improve the safety of off-road traffic by changing driver's license requirements for off-road traffic and requiring training for snowmobile riders?

What is interesting here is that all four top answers (Copeland score of .75 or more and median rating above 3.5 stars) cluster around education through local clubs and associations. In other words, rather than encourage further governmental license requirements and checks or tests, the crowd favors self-regulation by the community of snowmobilers themselves, another expression of a strong libertarian and partly communitarian ethos of self-reliance. The least popular ideas have to do with making getting a snowmobile driving-license as burdensome as getting a regular driving license, let alone a license that has same requirements as a motorcycle license. Generally speaking the crowd rejects a government-imposed new kind of license and favors self-regulation, education, and training through snowmobile associations are possible.

245: Snowmobilers should be encouraged to register with local or national snowmobiling clubs to receive training and information about off-road traffic safety.

246: Snowmobile owners should be encouraged to join their local snowmobile club to be informed about areas that allow snowmobile riding [This idea has actually the highest median rating of all]

247: Snowmobile owners should be encouraged to join their local snowmobile club to be informed about new regulations and restrictions in riding areas by, for instance, a group text-messaging system.

248: Snowmobile owners should be encouraged to join their local snowmobile club. The police and other officials could use this communication channel to reach all members

241: If there was a specific driver's license for off-road traffic, it should be sufficient if the group guide is a license holder when a group is snowmobile riding.

242: If there was a specific driver's license for off-road traffic, one driver's license could be valid for all off-road traffic and road transit.

243: If there was a specific license for off-road traffic, those who would have an off-road traffic driver's license should have more rights to ride freely off established routes than those who have not.

244: The off-road traffic driver's license training should provide information on forestry economy, environmental values, navigation etc.

239: A driver's license for regular cars should be required for riding off-road vehicles.

238: A specific off-road traffic driver's license should be created.

240: An off-road traffic driver's license should have the same requirements as a motorcycle license.

Safety. How to best improve the safety of off-road traffic by traffic arrangements?

A clear Condorcet-winner here (median rating above 3 star) is to implement the norm of driving on the right-hand side of the road when riding in open areas, a rather commonsensical solution. The idea of creating roundabouts is obviously seen as overkill (median rating of 1 star) and so is the reduction of the speed limit to 60 km/h everywhere. It's easy to imagine that such a reduction would take the joy out of snowmobiling in the wild for most snowmobilers and thus deny the whole point of that activity.

253: The use of right-hand side traffic should be made the norm when riding in open areas such as on ice and in swamps. Riders should pass route signs on the right side. This would decrease the number of accidents.

254: Roundabouts should be built in route intersections when there's space for those.

255: The speed limit for snowmobiling should be set at 60km/h in all areas.

Financial compensation for landowners: What would be the best way to compensate the landowner for the use of his land to off-road traffic?

This topic is particularly interesting given the quasi-complete reversal between the priorities of the crowd (compensation for landowners came last) and the priorities they predicted would come in first (compensation for landowners came in third out of 9).

Reassuringly, for this question, the most extreme idea--"Landowners shouldn't be compensated at all if a route or a trail crosses their property"--clearly came in last. So did the view that absent agreement with the landowners no route could ever be established, an idea which, if implemented, would probably give too much of a veto power to landowners. A sensible suggestion came out as the Condorcet winner (median rating of 3.5 stars), namely "223: Multiple factors, such as land quality, agriculture, farming and forestry, should be taken into account in order to fairly calculate the amount of compensation owed to landowners." Then came another measured idea (with an ever so slightly higher median rating of 3.7 or so), with a libertarian twist: "229: Financial compensation should be given to private landowners, but the use of existing state-owned routes should remain free of charge."

The third best idea by Copeland score (which, however, drops just under a three-star median rating) is: "[233] Proper financial compensation for landowners should be paid and routes should be based on voluntary usage agreements."

Other proposals in the 3-4 star range:

231: Temporary route usage permits to non-members of the local clubs should be granted; payments would be supervised in the same way as an automobile tax, for instance.

224: The amount of compensation for landowners should be calculated separately for summer and for winter periods.

235: The amount of financial compensation for landowners can be calculated by taking into account the estimated profit from the land (from agriculture or forestry). Compensation for agricultural land should be four times bigger than for forests.

225: Local forestry associations should be consulted when negotiating a compensation amount.

230: The financial compensation for landowners should be organized so that drivers pay for the route maintenance and are given a sticker to prove their payments.

Ideas that were more clearly disliked followed (Copeland scores under .5 and median rating 3 stars or lower):

232: The financial compensation for landowners should take into account that snowmobile riders can ride along existing power lines and other already existing paths, which are suitable for snowmobile riding. The sum plus interest should be given to the landowner at the end of the year.

226: The amount of compensation to landowners should be organized so that a usage fee (including a recurring payment like a rent and compensation for possible damages) is collected from drivers in the beginning of the year and the sum plus interest is given to the landowner at the end of the year.

228: The amount of compensation for landowners should be the same as in the Swedish and Norwegian model: 150 euros per snowmobile.

227: Compensation for landowners should be 1 Euro (\$1,34) per 1 meter (1,09 yards). A snowmobile club would collect the payments from its members and pass them on to landowners. For example, 1 kilometer (0,62 miles) of snowmobile trail would require 1,000 euros (\$1,380) that would be divided by the number of members in a snowmobile club.

236: The amount of financial compensation for the landowner should be paid for all routes and trails and agreed upon by the snowmobile club and the landowner. If no agreement on the amount can be reached, no route can be established.

234: Financial compensation for landowners should be paid and all costs of routes should be paid by the snowmobile clubs.

237: Landowners shouldn't be compensated at all if a route or a trail crosses their property.

8.6. Problematic data

In some cases, we are not sure how to report on the results because the Copeland scores are not aligned with the median rating (or other values for that matter, but we focus here what we deem the two most reliable indicators). For example, for the following question (p. 10 of the Appendix 2, <http://bit.ly/197CenL>):

Choice of the responsible authorities for deciding on new routes, gathering information on off-road traffic, and deciding on appeals for change. What would be the right authority to decide about routes?

The Condorcet winner (a 3.5 star median rating) is clear: "Decision-makers of new routes should vary depending on whether the route is a small local connection or part of the national network. The local authority (municipality) would decide on local routes and a county or a national authority about wider route networks."

However, the second idea (with a Copeland score of above .75) has only a two-star median rating: "Decisions on establishing new routes should be made by an environmental panel in a municipality." It's not clear that this idea is a winner at all. In fact, in light of the general suspicion towards environmentally-friendly issues or institutions, it would seem that this idea must be interpreted as disliked, rather than liked.

The third idea by contrast has a Copeland rating only just above .5 but a median rating of 3 stars: "The municipal officials should remain the responsible authority to decide on establishing new routes." It should probably be considered of higher value than the idea ranked number 2 according to Copeland scores.

More problematically still, the fourth idea, which is clearly rejected according to the Copeland score (0.35) nonetheless has a median rating just above 3 stars, making it unclear whether this idea is popular or unpopular. These conflicting evaluations are particularly intriguing given the “libertarian” and decentralized nature of the idea: “The establishment of new routes should not be decided upon by a public authority but through private agreement between snowmobilers and landowners, and possibly via snowmobile clubs.”

Regulation of harm to nature, environment and neighbors. How could the noise caused by off-road traffic be the best managed?

Here the commonsensical solution of ensuring sufficient distance of routes from residential areas is the Condorcet-winner. Consistent with this result, the second and third best ideas along the Copeland score are basically more complex and specific versions of that same idea, specifying the exact minimum distance (1km). These latter two ideas though see their median rating fall to 1 star, which suggest profound dislike by the crowd so it is not entirely clear how we can reconcile these two evaluations. Things are clearer among rejected ideas: a very unpopular idea is that of making the law more restrictive in its description of what counts as “harm” justifying compensation for noise disruption. The idea of going from “considerable” harm to “greater than little harm” is clearly rejected. This same idea is also rejected in earlier questions. The least popular idea of all suggested turning snowmobiles into electric snowmobiles.

316: In order to reduce noise, off-road traffic routes should be far enough from residential areas.

311: Routes should be established with a minimum distance to residential areas. The more traffic there is on a route, the greater the distance

should be between the route and residential areas. The minimum distance should be 1 km.

312: No off-road routes should be allowed closer than 1 kilometer from quiet areas or recreation areas marked in urban planning zones.

317: In order to reduce noise, there should be payment waivers for light snowmobiles with small motors that travel at a lower speed.

314: The off-road traffic law should include restrictions for off-road traffic noise pollution limits.

320: When making noise level evaluations for route plans, noise levels of other ongoing projects, such as building projects and the joint effects

of the routes and projects on quiet areas, other recreational activities and animals should be taken into account.

319: Proper noise level evaluations and predictions should be included in the route plans and applications.

309: Vehicles should have a speed limit of 30 km/h near residential areas.

315: There shouldn't be any regulation in the off-road traffic law regarding noise pollution levels.

318: The term in the current law "considerable harm" should be replaced with a stricter term, for instance one like "greater than little harm".

313: Noise limits for off-road traffic should be more restrictive than for regular traffic.

321: Snowmobiles and ATV's should be taxed according to their noise level and gas emissions.

322: Routes should be narrower than 6 meters. This would keep noise levels down as narrower routes don't allow fast and noisy riding.

310: Snowmobiles should be powered by electricity. This would decrease the noise level.

8.7. Minority cluster: Landowners and environmentally oriented

To understand better the composition of the crowd's idea preferences, we clustered the users based on their idea rankings. For each user, we took the set of all scores that a user assigned to a proposal, and normalized these scores to have the same mean (0.5) and standard deviation (0.25); the choice of mean or standard deviation will not affect our clusters. We then computed a distance between all pairs of users who rated at least one proposal in common: the distance between two users was computed as the sum, over all proposals rated by both users, of the absolute value of the difference between the normalized score the two users assigned to that proposal.

This gave us over 40,000 distances among 305 users. Since 872 edges is the connectivity threshold for random graphs with 305 nodes (from the theory of Erdos-Renyi graphs).

Hence, we chose to consider the top 1,000 closest user-pairs, and made a graph with an edge between each of these 1,000 user pairs. This graph was then clustered using the software package R; in particular, we used the fast greedy community detection method. This gave us exactly 5 clusters, which are visually depicted in the next figure, Figure 14.

Minority cluster

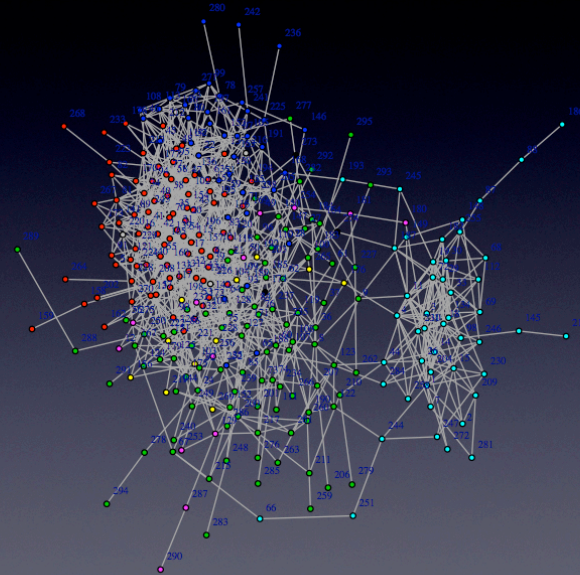


Figure 14. Minority and majority clusters identified by idea preferences.

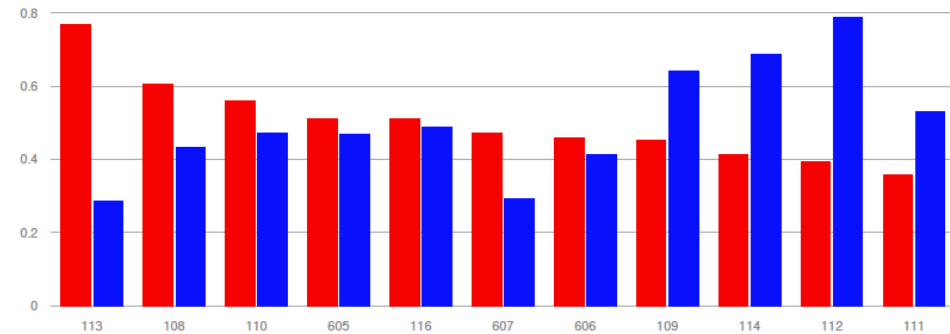
Note that one cluster (with light blue nodes, off to the right) is clearly separated from the rest. This turns out to be a very interesting cluster when we look at how proposals were scored by users in this cluster versus the rest of the community. We call this cluster the 'Minority cluster'. This cluster is on the reader's right in the Figure above. More details are provided later in this chapter.

Note that the graph is connected; not all user pairs with an edge between them are in the same cluster; and finally, not all user pairs in the same cluster have an edge between them.

The Minority cluster consists of 47 users, who consistently preferred protecting landowners' rights and preserving the environment over increasing the possibilities to ride off-road traffic vehicles. This cluster basically wants to give landowners the ultimate right to decide about off-road traffic on their land. The issue preferences are illustrated in Figure 15, comparing to the preferences of the majority crowd.

Finnish off-road traffic proposal aggregation: Minority cluster comparison (Borda)

The following charts give a comparison of how different groups of users rated the proposals. Each chart represents one topic and each proposal has a set of bars representing how different groups of users scored the proposal.



Topic

- What are the most important issues in off-road traffic law? Please organize the issue areas by grabbing a block with your mouse and dragging the blocks into your preferred order so that the most preferred one is up and the least preferred one is down.

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 113: Increasing the possibilities to ride off-road traffic vehicles in Finland.
- 108: Improving safety in off-road traffic.
- 110: Regulating about route setting practices.
- 605: Off-road traffic law and other laws. Regulation off-road traffic in other laws
- 116: Enabling the professional use of off-road traffic, such as in reindeer husbandry and fishing.
- 607: Developing the preparatory process of off-road traffic law process.
- 606: Regulating about snowmobile route impact evaluations.
- 109: Decreasing illegal riding in off-road traffic.
- 114: Decreasing the harm of off-road traffic to natural environment and to neighbors.
- 112: Landowners' rights to restrict and prevent off-road traffic on their land.
- 111: Financial compensation to landowners for off-road traffic on their land.

Figure 15. Minority cluster comparison.

It is important to note, however, that identification of a minority cluster does not mean that landowners' rights would not be considered important in other clusters. But in the Minority Cluster, the landowners' issues were consistently ranked the highest.

Being able to identify a clear minority cluster is very important because it helps us analyze the results of the crowd evaluation at a more detailed level. When the crowd gets to have a say and express their preferences in an open online process, there is a considerable amount of concern about the tendency of the majority group to override minority groups. With clustering, the voice of these minorities is separated out from the majority, allowing us to hear the minority. This can also function as a motivating factor for minorities to participate in online crowdsourcing efforts, because their voice is not subsumed within the majority.

8.8. Gender and Minority Issues.

Our data allowed us to disaggregate between the views of men and women (gender was self-reported in the surveys) as well as between the views of our minority cluster and those of the majority cluster. We present the results on differences with regard to gender first, and then on differences between the majority and the minority identified through the clustering technique.

8.8.1. Men vs. women

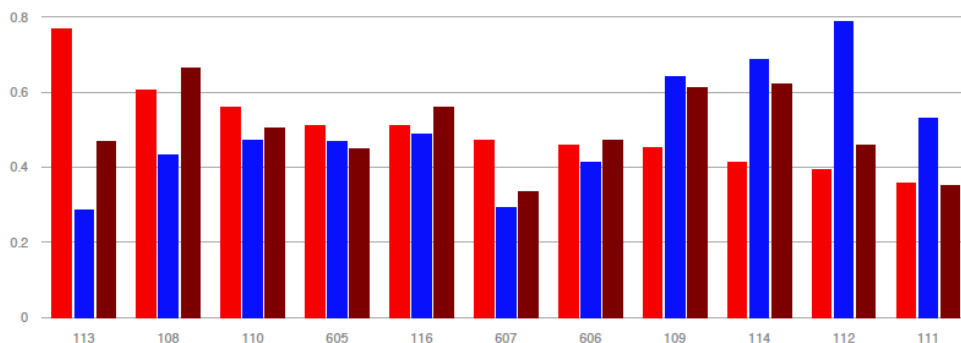
One needs to keep in mind that there were only 26 women versus 278 men in our pool of participants in the crowd evaluation process. While the overall findings presented so far are fairly robust, calculating Copeland scores (or mean or median scores for that matter) for a small group of users is more problematic. We therefore look in this section on the ranking of the proposals by Borda score, as the Borda score is more robust for a smaller group of participants. Moreover, we do not compare preferences of men and women by idea category but focus on discrepancies by question instead.

Our observation is that while preferences of men and women were aligned on a great number of issues, it nonetheless appears that women have different preferences from men over certain issues. We demonstrate these differences by reporting on a selection of the most salient discrepancies across a variety of questions.

Regarding the ranking of categories, women put safety issues, the environment, and illegal riding ahead of the top issue favored by men, namely “increasing the possibilities to ride off-road vehicles in Finland.” Women rank this issue at position 7 out of 11, with a Borda score under .5. Among men, the same issue has a score of 1. This is the biggest discrepancy that can be noticed between men and women. In contrast, when predicting the top categories for other evaluation experiment participants, women make roughly the same predictions as men, placing landowners’ rights, safety, landowners’ compensation, illegal riding, and environmental and noise concerns at the top of the issue list. Men also predict that these issues are the most important for other participants though they place them in a slightly different order: illegal riding comes first, safety second (as for women), landowners’ rights third, environment and noise pollution fourth, and financial compensation to landowners fifth, as illustrated in Figure 16.

Finnish off-road traffic proposal aggregation: The crowd, minority, and females

The following charts give a comparison of how different groups of users rated the proposals. Each chart represents one topic and each proposal has a set of bars representing how different groups of users scored the proposal.



Topic

- What are the most important issues in off-road traffic law? Please organize the issue areas by grabbing a block with your mouse and dragging the blocks into your preferred order so that the most preferred one is up and the least preferred one is down.

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)
- Female, (26 users)

Proposals

- 113: Increasing the possibilities to ride off-road traffic vehicles in Finland.
- 108: Improving safety in off-road traffic.
- 110: Regulating about route setting practices.
- 605: Off-road traffic law and other laws. Regulation off-road traffic in other laws
- 116: Enabling the professional use of off-road traffic, such as in reindeer husbandry and fishing.
- 607: Developing the preparatory process of off-road traffic law process.
- 606: Regulating about snowmobile route impact evaluations.
- 109: Decreasing illegal riding in off-road traffic.
- 114: Decreasing the harm of off-road traffic to natural environment and to neighbors.
- 112: Landowners' rights to restrict and prevent off-road traffic on their land.
- 111: Financial compensation to landowners for off-road traffic on their land.

Figure 16. The global data, minority and female respondents compared.

Generally, women are less in favor of a more permissive law on the basis of the Swedish model than men. Women favor the protection of landowners' rights, specifically their right to influence the termination of a road, and the protection of the environment more than men. For example, women give a Borda score close to 1 to the idea that "if the effects of the route are more severe than estimated during the planning phase, the route should be temporarily discontinued."

Similarly, women trust the government and governmental institutions more to impose safety, environmental, and noise pollution regulations. For example, it is striking that the favored idea for women corresponding to the question "What would be the right authority to decide about routes?" is "The Ministry of Environment or the Finnish Environment

Institute should decide on all no-go areas for off-road traffic.” Typically, when men are confronted with an idea that includes the word “Ministry” or “environment,” they rank the idea very low. The idea to provide the ministry or Finnish Environment Institute with the power to make decisions on routes received a Borda score of 1 among women and of .25 among men.

Women are also more in favor of the idea of using increased police presence or GPS data and RSFID stickers to regulate illegal riding. In their response to the question how monitoring systems can decrease illegal riding, they favor these three options more than men do.

Women are less opposed to strong sanctions for offenders. For example, they are less opposed to the idea of confiscating the equipment of repeat offenders. They also support granting landowners rights to monitor traffic on their own land. Women give this idea a rating of 3.5 stars and above (an idea that men rate at 2.5 stars). Women are much more opposed to the idea of lowering the age for riding a snowmobile to 12 years of age. They are significantly more concerned with including all stakeholders in decisions about the route location. Finally they favor long-term planning of the costs and risks associated with a planned route as opposed to simply making sure the roads are sufficiently distant from populated areas (as men tend to prefer).

8.8.2. Minority cluster

The data on minority reveals a clear inversion of the priorities when it comes to ranking the most important issues in off-road traffic. Whereas the group as a whole essentially cares about increasing opportunities for off-road traffic riding and ranks landowners’ rights next-to-last, the minority cares about landowners’ rights first and about increasing the opportunities for off-road riding last. This strong contrast indicates that the majority essentially represents the interests of snowmobilers and the minority those of the landowners, or, at least, they have certain preferences regarding the issues that are aligned with those of landowners’ and snowmobilers’.

There is virtually no difference, however, in the way the whole group and the minority predict the priorities of other platform participants. They all rank safety, illegal riding, landowners’ rights and the environment as the top categories.

Among the most contentious ideas, which are favored by the minority but rejected by the group as a whole, are ideas related to landowners' consent, landowners freedom' to do what they like with their property, and anything that shifts the burden of proof, care, planning, and costs onto snowmobilers:

149: It should not be possible to establish a route on private property without the landowner's consent. Landowners should have an ultimate right to control their own property.

174: Route and trail maintenance should be organized so that planning, maintenance and building of off-road traffic routes are paid for by the snowmobile associations.

233: Proper financial compensation to landowners should be paid and routes should be based on voluntary agreements.

236: The amount of financial compensation for the landowner should be paid for all routes and trails and agreed upon by the snowmobile club and the landowner. If no agreement on the amount can be reached, no route can be established.

349: Landowners should be allowed to ride unregistered vehicles on their own land.

Among the ideas most often rejected by the minority compared to the majority, one finds, unsurprisingly the idea that the Finnish law should be similar to the permissive Swedish law. The minority prefers the Norwegian, less permissive law.

603 (see also 300 and 353, versions of the same idea): The Swedish model should be followed: there should be more freedom to ride snowmobiles off established routes and trails.

119: Undeveloped land beyond residential areas should be made available as free-riding zones.

There is a surprising consensus among the majority and minority on the regulation of harm to nature, noise, and neighbor with only minor discrepancies in ranking.

The main contrast on safety issues is that the minority favors the use of RFID-stickers whereas the majority would actually prefer more police forces deployed. Similarly, the minority would like to impose a zero tolerance alcohol limit whereas the majority would like this limit to be the same as for other vehicles.

8.9. Conclusions of the evaluation results

As presented in previous chapters, it is clear that the ideas, which grant more freedom for snowmobile riding, were the most preferred in the evaluation. That is not surprising, given the demographic of the evaluators: those who cared about recreational snowmobile riders' rights had a strong representation in the evaluator crowd, thus creating a biased sample. It is also not surprising that snowmobile riders had such a strong representation in the process, because they are an active group on dedicated online forums and thus online participation is not foreign to them. Based on the conversations in the problem mapping and idea crowdsourcing stages, it is also not surprising that the lack of possibilities to ride snowmobiles is a concern for snowmobile riders. That concern was emphasized in the conversations on the online platform.

The law-makers should take this concern seriously, as well as other concerns expressed by the crowd, such as improving safety, reducing illegal riding, protecting nature, and landowners' rights, and use the ideas as material for determining solutions for the problems in off-road traffic, and define the political line, which is the best and the most just to follow in the idea implementation. More details about the recommendations for the next steps in the later chapter 'Policy recommendations'.

What is also clear is that the crowd is not stupid. The crowd rejected the most extreme and vague ideas. Also, even though, or maybe because, the crowd is biased towards libertarianism, there was support to transparency and strong inclusion and representativeness of all stakeholders in law-making process and off-road traffic law related decision-making. This is also smart of the participants: the more representative the process is, the more legitimacy it will gain.

9. Challenges and lessons learned

9.1. Scalability

Processing the crowd-generated ideas for further evaluation is challenging mainly for two reasons: the scale and the unstructured nature of the ideas. The scale is a double-edged sword: increases in scale maximize the number of ideas and elevate the perceived inclusiveness of the process, but also multiply the amount of work required for idea processing.

The processing, which means the idea analysis, categorization and fact checking, in this project was done by the authors and research assistants. It was one of the most time-consuming parts of the project. Increases in the number of ideas add to the amount of human labor the idea processing requires. Also, the nature of the submissions as free text adds to the processing work. The ideas can be anything from a quickly written thought to an elaborate, multi-paragraph announcement. The reasoning might be crystal clear or there might be a lot of ambiguity. There might be references to existing conditions and problems that sparked the idea, but there might not be clear explanation about these matters.

Figuring out further details to understand the idea adds to the analysts' work, and sometimes it is impossible to interpret the idea clearly. This complicates the structuring of the ideas -- a crucial part of ensuring that all the ideas make sense for the larger public, for instance later in the evaluation process. That said, based on the observations on the platform and the authors' analysis of the ideas, most of the ideas could be easily interpreted. Several participants also attached comprehensive background materials to their submissions and clarified their points by responding to other participants' comments.

In future crowdsourcing projects, it would be important to ease the interpretation challenges by repeatedly asking the participants to include all relevant information in their ideas and add background materials when possible. This was communicated to the participants in the instructions on the crowdsourcing platform, but it is obvious that not everybody reads the instructions or remembers them. It is also very important to keep on developing the ways way to make the idea processing and organizing as efficient, robust, and consistent as possible. While it is possible that software will be able to process massive amounts of ideas in the near future, we are skeptical that this task can be performed, or at least entirely performed, by a machine, given the multiplicity of meanings that any given idea can take and the multiple ways they can be categorized. We believe that the task of idea processing and categorization has been systematically underestimated in similar experiments of the kind (e.g. Faria, 2013). Idea processing plays an important role in the process, because in the structuring phase, ideas are analyzed and categorized, partly determining the further treatment of the ideas.

Because the task relies on human judgment, it is very clear from our experience that there is a huge responsibility on the team doing the work to: 1) reproduce the ideas as faithfully as possible so as not to betray their meaning; 2) maximize their clarity and ease of interpretation for the end users (evaluators or legislators); 3) categorize them in a way that makes sense with respect to the specific idea but also the larger set of ideas. These tasks often imply tough choices. We occasionally had to go back to the original idea or even the original idea-originator in order to make sure we had the meaning right. We also sometimes had to disaggregate very long proposals into shorter ones that then got sorted under different categories. While this may have harmed the integrity of a proposal, we felt that it would have been impossible to fairly compare a paragraph long idea with multiple dimensions and sentence-long proposals with one main idea. Even so, we find out that the most preferred ideas in the ultimate evaluations seem to be the most elaborate and complex ones, combining various proposals in one.

As to the sorting of ideas, there was not always only one way to do it. For example, many ideas could fall equally under several headings. For example, when an idea fell equally well under the heading “safety regulations” or “route locations,” we had to decide to either rehearse the idea twice under each heading or, if one of the heading already contained a similar idea, add it to the other one, so as to balance, among other things, the number of ideas per category. Based on this experience, we found that developing timesaving sorting principles and procedures while still ensuring the consistency, will be very important for more large-scale experiments. Computational tools could provide help in this task, and maybe also the crowd in the form of ‘open idea interpretation and categorization’. That said, we also think that a degree of ambiguity is probably unavoidable in this kind of task and provided it remains contained, it shouldn’t be seen as a major issue.

The challenge of scalability might be eased in future, as sense-making tools based on developing natural language processing become more common. The sense making tools are used in large-scale idea deliberation and management to automatically analyze free text. The tools can analyze the core of the idea automatically and the tone of the comments almost equally to human analysis (c.f. Convertino, Sandor and Baez 2013). The use of sense-making tools would make the idea management and processing much faster and would require less human labor. Yet, even in the current scenarios, human labor will be needed at least for a long time in process design, idea analysis, processing and of course, decision making. These tools can only lessen the human effort required to a certain extent.

9.2. Legitimacy Issues

9.2.1. Lack of representativeness of the participants

A major issue that is faced by all experiments in which participants self-select, whether it be crowdsourcing in our case or participatory budgeting in other democratic innovations, is that of legitimacy. Legitimacy is a complex concept, which in politics was long traced to the consent of the people. On that view of legitimacy as rooted in consent, a decision is legitimate to the extent that it is authorized by the people themselves (through a direct consensual decision, a vote, or a referendum) or representatives that the people is considered having consented to, typically via elections. In the latter case of mediated

consent, the assumption is that whatever the representatives decide on behalf of the people is an expression of the people, at least barring explicit expressions of discontent (massive demonstrations or the like). Given the growing crisis of legitimacy encountered in the last 20 to 30 years by elected representatives and electoral institutions, it is not clear that consent of the people is (1) seen as any longer transferred to the decisions of elected lawmakers or (2) seen as the most important source of legitimacy for decisions and laws.

Either way, an obvious alternative source of legitimacy is the representativeness of the people in charge of making laws, regardless of whether they have been elected or not. Representativeness is also a hard concept to define but one of its meanings is the way in which the people making decisions make decisions that the people themselves would have made had they been given the time and option to think carefully about the issues. A proxy to assess this kind of representativeness is descriptive or statistical representativeness, i.e., how similar the people making decisions are to the people they represent. In other words, a new source of legitimacy is how statistically similar the decision-making group is to the represented group.

While it is clear that elected representatives are typically a biased sample of the larger population, the participants in our crowdsourcing experiment are unrepresentative from a statistical point of view (while not having the advantage of having won over the votes of the rest of the citizenry). To single out only one problematic dimension, the entrance surveys indicate that, as already mentioned above, 86% of the participants in the idea-sourcing platform were male. In the evaluation part of the experiment, 92% of them were male. It is thus very possible that this lack of diversity harmed the idea-generation process in that for example some gender-related issues were neglected as a result.

The truth is that the only way to ensure full descriptive representativeness would be to ensure participation at every stage of perfectly randomly selected crowds. Besides the obvious feasibility constraint of this requirement, we think the legitimacy issue should not be overblown. For one thing, the crowds involved in our experiments, while self-selected and overly representative of snowmobile owners and land-owners, may still have been able to generate an idea, which can help improve the law and/or be of general interest for the community. Second, their role in the process was never designed to be binding on the decisions of elected representatives. Their input should be seen as a new source of information and perspectives on a complex issue, where more diversity of input was needed. While it is possible that exhaustivity of the issues may not have been achieved through the crowdsourcing process, one must remember that the comparison point is currently the pool of decision-makers previously involved in the law-making process, namely a handful of civil servants and interest group representatives. From that point of view, the greater diversity introduced by the crowd's input should be seen as an additional though perhaps insufficient source of legitimacy.

Finally, and this remains of course to be seen, if the crowdsourcing experiment ends up generating ideas that the law-makers find valuable and use in the production of the new law, this result will retrospectively confer classical, consent-based legitimacy on the activities of the crowd. It will indicate that the lawmakers elected by the people found the input useful. One might further hope that the people themselves will be able to express their satisfaction with the crowdsourced law, either through a direct vote or referendum on the law itself or, were this impossible, on the more general principle of extending crowdsourcing moments to other law making and policy making processes.

9.3. Empowering citizens

This is not so much a challenge as a lesson learned. When we first tested the evaluation tool (CrowdConsensus) on the participants, some of the feedback we first heard was that the criterion for evaluation was not clear and that they did not know how the current law regulates a certain matter so that they were not confident about the kind of implications their choices would have in the law. Thus, the phrasing the criterion proved to be crucial and required a lot of thought. Our hesitation was between the two following formulations, using one subcategory as an example:

- 1) How should the off-road traffic law regulate about the time frame of route permits?
- 2) What would be the best way to determine the time frame of route permits?

Formulation 1 asks the participants to evaluate the idea based on their understanding how the law should regulate about the matter. The formulation is very prescriptive. The second option takes a step away from the law (yet it is clear that the law is the context for the evaluation) and more clearly asks about the 'best option' according to the respondents' preferences, and, furthermore, is less prescriptive.

We eventually settled for Formulation 2, which had the merit of being more straightforward and directed the participants towards immediate problem solving rather than the complex and possibly multifactorial issue of legal desirability. Legal desirability will be evaluated in further steps in the law-reform process.

The question of phrasing the criterion proved very interesting, as we sensed a possible unease among the participants at being put "in charge." It struck us that citizens are used to think of policy-decisions as choices with right or wrong answers independently held by experts, when in fact the key for us was to generate those answers from them. So beyond finding the right phrasing for the criterion, the difficulty was partly in conveying to participants that there were no right or wrong answers, to which the researchers or the experts in government would have independent access and on which they were being "tested," as if they were lawyers or professional politicians.

So we had to make it clear that we were not asking them questions that demanded a lot of expertise as much as we were asking them a question about what they wanted, regardless of the legal and technical implications of their choices. We thus added a paragraph on the

first page of the evaluation platform that read: "There is no right and wrong answers to the questions you are asked to answer. The ideas you are asked to rank/compare/rate were generated by you and people like you, their final ranking or rating will be defined by you and people like you. This experiment is premised on a fundamental belief in citizens' competence. You don't need to know the current law or the legal implications of your answers to be able to answer the questions." We thus hope we managed to get the participants to generate answers as empowered and confident citizens who felt valued and trusted. We surmise that a key to the success of any kind of crowdsourcing experiment, including this one (if it is to be judged successful), will lie in the ability of the procedures to empower citizens and make them feel genuinely trusted.

9.4. Technical implications

In the idea crowdsourcing a software called IdeaScale was used. Software was licensed for about a 2,000 euros per year. Licensing works well for a pilot project at this stage, because building a new software for the purpose of activity (citizen participation in policy-making) that is just taking shape would be too slow and costly. The software was translated into Finnish with volunteer work and automated language translation into Swedish and English were included in the software.

The IdeaScale software is used in idea crowdsourcing by governments and companies in several countries and is robust as such. The software provides useful features such as voting up/down, commenting, badges, user activity stream, possibility to follow ideas and users, sending private messages, keyword tagging, automatic search for similar ideas, choosing tabs to show most popular ideas or most recent ones or based on the topic category.

Just as in most crowdsourcing software, some design challenges remain. One of them is the display of the ideas. Now a user can choose to see either the most popular ideas (based on votes), most recent ideas or ideas based on topic category. In either variant, it is challenging to get a quick overview of the ideas and the comment threads, which can get lengthy in active conversations. This is the case particularly with those users who join crowdsourcing later in the process. They can feel overwhelmed by the amount of ideas that they should peruse in order to gain sufficient understanding about the content on the platform, and this can lead to frustration. As the scale of ideas and comments increases, the intensity of the challenge increases, as well. One option to address this challenge, particularly with high participation numbers, is to provide a (random) sample of ideas to each participant.

For the idea evaluation, a new tool (CrowdConsensus/Joukkoarvio) was built by David Lee with the team. The tool was tested and then used in the evaluation. Some technical issues were identified during the evaluation and were then fixed. The tool will be developed further based on the user feedback.

In future projects, it would be worthwhile to test combining idea generation and evaluation so that ideas were produced and evaluated in parallel. This would increase the dynamism of the process and motivate users to participate both in ideation and

evaluation. Also, incentives for collaborative idea development on the platform should be applied to the process design and to supportive technical features.

Furthermore, it would be important to test adding educational elements to idea-generation and evaluation. In this project, the educational aspects included information about off-road traffic and the law on the online platforms. Some of the most impactful learning experiences seem to derive from unstructured exchanges among the participants. On the evaluation platform, the participants were prompted with further information about the question at hand, e.g., about the regulation of a certain issue in the current law, which some of the evaluators perceived as learning moments. That dimension should be studied further and supporting features should be implemented.

10. Seven lessons learned – a popularized summary

In this chapter, we summarize some of the lessons learned from the off-road traffic law experiment in a summarized, more popular manner. This chapter is based on our blog post, which was published in October 2013 at the New York University's Governance Lab blog. (original post is accessible here: <http://thegovlab.org/seven-lessons-from-the-crowdsourced-law-reform-in-finland/>)

1. People participate in a constructive way.

A substantial number of people are really eager to participate, when they are given a meaningful opportunity to do so. That opportunity needs to be something that they care about. And there needs to be a plausible promise: meaning, their participation must lead to something. In the Finnish experiment we received hundreds of ideas from hundreds of people. The interactions on the online platform were civil and constructive. Only 20 comments had to be removed out of 4,000.

2. The crowd is not delusional about its potential impact on the law.

It is often said that participatory practices in policy-making are not desirable, and maybe even dangerous, because they create false expectations in the participants, leading them to believe that they will be directly impacting the laws. Direct taking into account of raw input, however, can rarely happen. The ideas contributed by participants generally need to be debated, refined, recombined, and some of them discarded. Thus, according to this argument, crowdsourcing is dangerous because it promises more than it can deliver and is bound to let the crowd down, demotivating them from participating in the future.

We were curious to see what the crowd's expectations really were. Based on our analysis of participants' interviews and survey data, our conclusion is that the crowd is savvy and realistic. At least this particular Finnish crowd was. The participants participated because they wanted to impact the law. Yet they were cautiously optimistic about the likelihood of their impact.

The crowd is hopeful, but realistic. They understand that one idea or opinion may not count so much at the end. And there are hundreds of other opinions too that need to be heard, and the end-result, the law, will be a compromise of many perspectives. This doesn't mean, of course, that the people can or should be let down and that their opinion shouldn't be taken seriously because they don't care. They do care, that's why they overcome their pessimism and spend their time voluntarily on the crowdsourcing platform.

3. Crowdsourcing creates learning moments.

As the participants exchanged information and arguments on the crowdsourcing platform, they learned from each other. As one interviewee, who participated in crowdsourcing said:

“I’m somewhat surprised to see that the online process serves as a way to add to the participants’ knowledgebase and correcting their incorrect perceptions. I had read carefully the current law and the expired bill, and I realized that quite many participants didn’t have correct understanding about the terms about the law and its implementation. But, in many conversation threads these misconceptions seemed to transform into correct ones, when somebody corrected the false information and told where to find correct information.”

Exposure to others’ perceptions didn’t lead into opinion changes, yet it made the participants to know the others’ positions and circumstances better, and thus lead into deeper understanding of even opposing opinions. Similar impact occurred in the evaluation stage: the evaluators reported that being put into a situation where they need to evaluate ideas from an opposing perspective, e.g. an environmentalist evaluating a list of ideas about increasing off-road traffic, and vice versa, creates cross-cutting exposure.

The educational aspect deserves further studying in future experiments. It is important to study what are the triggers for learning and how to enhance this learning dimension in future crowdsourcing experiments of the kind.

4. Crowdsourcing as knowledge search

One main concern in participatory methods in policy-making, in which participants self-select, is the risk of misrepresentation of the general population’s preferences. In crowdsourcing we typically deal with self-selected individuals, who are not as a group statistically representative of the population. Further, crowdsourcing platforms like ours allow people to participate anonymously, allowing for the possibility that the same people participate multiple times using multiple profiles.

In our case, we were crowdsourcing ideas to improve the law, not delegating ultimate decision-making power to the crowd so the problem of legitimacy is not necessarily acute. Because the focus was on idea and information collection, an idea didn’t gain more weight from being voted on multiple times. Duplicates were consolidated into one single idea in the later idea categorization. The profile of the idea presenters and their lack of representativeness didn’t matter either, because it was their information and knowledge that we were after, not their identities. That said, it is likely that some good ideas were not produced due to the skewed nature of the sample of participants.

5. The crowd is smart.

Based on the idea evaluation results collected so far, we conclude that the crowd – at least this specific Finnish crowd – is smart. The evaluation took place on a new crowd evaluation [tool](#) built by [David Lee](#) at Stanford University. Each participant reviewed a random sample of ideas by comparing, ranking and rating them. Based on the evaluation

analysis, it seems that the crowd preferred commonsensical and nuanced ideas, while rejecting vague and extreme ones.

6. Minority voices were not lost.

What proved a very interesting and successful method to analyze the evaluation results was clustering. The clustering algorithm didn't know anything about the demographics of the population, yet it identified a minority cluster which aligned strongly with certain demographic minorities, such as females and those whose preferences were aligned with landowners' rights. The opinions of that group differed from those of the majority groups.

Being able to identify a minority cluster is important because it helps us analyze the results of the crowd evaluation at a more detailed level. With clustering, the voice of the minorities is separated out from the majority, allowing us to hear the minority. The use of this technique can also function as a motivating factor for minorities to participate in online crowdsourcing efforts, because we can promise them that their voices won't be simply drowned out by whatever majority emerges.

The question of representativeness still remains. Based on demographic data, the participants in the evaluation process were biased towards male (more than 90% of the participants), who live in Northern Finland and who identify themselves as recreational snowmobile riders. The idea generator crowd was more equally spread in geographic location and issue preference.

Obviously, these dominant groups might not represent Finns' general opinions. Yet, these are the groups who seem to care about the off-road traffic issue. If the whole population were asked (in fact, they were asked, because the process was open for anybody to participate in) to generate ideas or evaluate those, would they bother to participate? If they don't care, should those who care not be heard at all? This is one of the core questions in participatory policy-making.

7. Next steps

The next important question is the following: How should the decision makers treat the crowdsourced input and the evaluation results? We recommend that the decision makers consider the crowdsourced input just like they would consider input from other sources such as interest groups and hired experts. The evaluation results should help to focus on the most promising ideas, because the crowd already filtered out the vaguest and least promising ones. The politicians, of course, have to determine what is the most appropriate political line to be followed in the idea implementation. Further, the ideas should be perceived as raw material that most likely needs to be refined.

Maybe the main difference between the traditional law-making process and this new one will be that both the idea-generating and the evaluating crowds will receive a reasoned justification from the law-makers as to why their ideas were integrated into the law, or rejected. Public justification is a core ideal of deliberative democracy and we trust that public shared reasoning will ensure transparency in the law-making process. If this part of the experiment is done well, we believe it will keep the people motivated to participate in further crowdsourcing experiments.

11. Policy recommendations for the off-road traffic law reform

11.1. Working group for the law reform process

We recommend that the Ministry of the Environment establishes a working group for the off-road traffic law reform process. The working group should include representatives from all relevant stakeholder groups and, if possible, in one form or another, also representatives beyond the traditional interest groups, e.g., from the group of participants in the idea crowdsourcing process. The group should gather in meetings to draft the bill.

11.2. Transparency during the law reform

All materials from the working group meetings, bill drafts and other related materials should be published online. It is important to keep the law reform process as transparent as possible to give interested citizens the possibility to follow law making and to participate at least in certain sequences. The participants also hoped for transparency in the later stages in the law reform, not only in the ideation stage. Dedicated representatives should be invited to the committee to represent the ideas and to gather the feedback about the ideas to the participants.

11.3. Treatment of the ideas in the law-making process

The crowd produced several hundred ideas, which have been evaluated both by crowd evaluation and by expert panel. The ideas should be considered for inclusion in the reformed law. The working group should consider the ideas category by category and discuss, e.g., the effectiveness, feasibility, the ease of implementation and cost-efficiency of the ideas.

If more information is needed to assess an idea, the working group should consider preparing a report, which would include relevant information. For example, if there is not enough information available about the efficiency of RFID-sticker to present that trail usage fees are paid, the Ministry of the Environment should seek information in countries where such a method is already in use, if possible.

The opinions of the crowd and the expert panel -- basically, the results of the evaluations - - should be taken into account in the law-reform, but the results should not dictate which ideas will be considered for further processing. All ideas should be considered for further processing. Also, if new ideas are presented in the working group, those should be considered as well. The ideas themselves could be seen as raw material, which the law-making committee can refine further to find their true potential. For instance, would it be possible to test some of the most promising ideas in practice in pilot projects?

The working group should establish a systematic model of how to assess each idea quickly and efficiently in order to ascertain which ideas are the most consensual among the working group members and can be considered for the law. The online evaluation model created by the authors (the one for the expert panel) could be one way to conduct the idea evaluation among the group. The group members could evaluate the ideas in advance before the meetings. Then, the results would be processed and shared before and in-between the meetings. Thus, the meetings could be efficient and focus on ideas that require further discussion.

The reasons why the committee considers an idea worthwhile to be processed further to the law, or doesn't consider it worthwhile, need to be documented and shared with the idea generators.

11.4. Communication with the online participants

It is very important to keep the participants who were part of the idea generation and evaluation process updated about the progress in the law reform. The authors have gathered an email list of those participants who want to receive updates about the process, and that list can be used for communication. Also, regular updates about the process, e.g., in the form of short press releases or blog posts, should be published.

The Ministry should also consider using live methods to communicate with the participants in certain sequences. For instance, a Google Hangout session with the Minister/other representatives in the Ministry could be organized to inform the participants about the law reform procedure and to give them an opportunity to ask questions about the reform. This would be appropriate given the strong motivation and positive engagement of the online participants.

12. Recommendations about using crowdsourcing in policy-making

Based on the experience of using crowdsourcing in off-road traffic law reform, we can envision this technique benefiting democracy in several ways. First, for policy-makers, crowdsourcing present the advantage of giving them access to a large pool of knowledge and information, which they can then channel, or not, into policies.

Second, for citizens, crowdsourcing provides an access to a policy-making process that was traditionally beyond their reach, opening an avenue for civic participation likely to empower at least some of them and perhaps able to increase general citizen engagement.

Third, because crowdsourcing offers a contact point between citizens and law-makers, it is likely to increase levels of trust and respect between the communities and when done well could help resolve the so-called crisis of representation faced by representative governments. Crowdsourcing, provided it is not just used as a cosmetic and marketing tool, can thus add legitimacy and stability to existing institutions, while increasing the efficiency of the law-making procedures.

Crowdsourcing, however, is not an end in itself nor can it fix every problem in government. Like all technologies and tools, it should be used as a means to reach a pre-defined and specific goal, whether the goal is to increase and deepen citizen engagement in policy-making, to gather information from a diverse group of people, or something else. Thus, the decision whether to use crowdsourcing or not should always be made in a deliberate manner.

We propose the following five recommendations about using crowdsourcing in policy-making.

1. Integrate crowdsourcing to several kinds of policy-making processes both nationally and locally, for instance to law-making, urban planning, national strategy building and future scenario creation.
2. Use crowdsourcing in a variety of ways. Integrate crowdsourcing at several stages of a policy-making process: when the goals of the policy-making process are only being set, when there is a need for more information in the process, when there's already a draft which the citizens can comment on, and so on. Depending on the nature of the process, crowdsourcing can be used in short or long sequences ranging from few weeks to several months.
3. Use crowdsourcing in combination with other participatory tools, for example deliberative polls, citizens' assemblies, or citizens' juries. The beauty of existing "democratic innovations" is that they form modules that can be easily combined in different ways and to effects we suspect could be very beneficial, time-saving, cost-efficient, and legitimacy-inducing. For example the crowdsourcing part of the law could be combined with the creation of an advisory deliberative assembly made up of randomly selected citizens, whose role could be as varied as sifting through the

proposals and evaluating them (rather than the crowd or a panel of experts) or even come up with a law proposal themselves.

4. Integrate crowdsourcing into the daily practice of politicians and civil servants. Crowdsourcing shouldn't be perceived as an external process, but it should be internalized into governmental practices as a one tool that can serve civil servants, politicians, and citizens alike. Crowdsourcing should be integrated already into the preparation of a policy-making process. When a new policy-making process is being implemented, citizen involvement and its modalities should be considered.

5. Build a national database of crowdsourcing processes to document the results of these projects. In this database, lessons learned about crowdsourcing are shared in public, and thus can be applied in other crowdsourcing processes. One important question would be to identify what kind of questions, issues, or problems crowdsourcing is a best resource for. It is possible that crowdsourcing is particularly useful for technical issues where knowledge is widely distributed (as it was for example among snowmobile users, property-owners, and environmentalists in our experiment). It would be interesting to apply crowdsourcing to more explicitly value-based issues, such as gay marriage or immigration laws, and see whether it has any virtues there as well.

13. Possible further steps in the process

If time and funding permits, we are considering having a random sample of the Finnish population take the same survey about the ideas considered and produced by the crowd. The goal would be to ascertain how different the judgments of the self-selected crowd compare with the judgments of a representative sample of the population. The closer the judgments, the more legitimacy we believe the crowdsourcing process would have in that the individual participants would come closer to embodying the “will” of the Finnish people. We suspect the difference in judgments will not be as large as is the difference in demographics, such that the crowd might not turn out to be such an imperfect proxy for the larger population after all.

14. Crowdsourcing 101: Steps we propose are important in crowdsourcing processes

In this chapter we summarize advice for crowdsourcing processes.

Define the goal. Decide early on whether the focus is on sheer aggregation of ideas or on collaborative and deliberative identification of problems and solutions, or if the goal is something else. Define and announce clear goals for the process. It does not mean you can't change later but better have a guiding principle.

Create a participatory contract. Design a participatory contract where you display what the experiment is about and for and what kind of participation, ideas and proposals you are looking for. The more clearly the goals are communicated to the participants, the easier it is for them to grasp the goals of crowdsourcing and act accordingly.

Granularize tasks, yet leave room for change. Define the tasks clearly to maximize the usefulness of the crowd-input. Sometimes the more modularized tasks, the better. On the other hand, too much granularity might lead into missing information about the big picture. Think about the difference in the likely responses you will get to the following questions: i) The Government is reforming the law, which regulates food ingredient listings in food products. How should the law be reformed? ii) The Government is reforming the law, which regulates food ingredient listings in food products. We are looking more information about the current problems in the law and potential alternatives for the regulation. Do you know about alternative regulations in other countries? If so, please share your information here and attach pointers to online resources if you know those. Also, please look at the other questions we have in this project elsewhere on this website.

The task definitions should communicate what is expected from the participants and point to existing information, which can be helpful in conducting the task. Even though the tasks are initially defined, there should always be room to iterate the tasks during the process based on user feedback and observation. Hence it is worth being sensitive about the early input and evaluate if the input can be useful.

In the crowdsourced off-road traffic law case, for instance, we added a topic area in which the participants were able to propose their own topic. It turned out that the participants perceived several new topic areas that we organizers hadn't been aware of. The initial task definition is typically done by the organizers, but the participants can also prove helpful in the process. The possibility to work with the participants already at the task definition stage should be explored further.

Choose the right tools. The technology is not neutral. Create a custom-tailored platform that allows data aggregation and/or deliberative exchanges and/or all the desired activities, depending on the goals that have been set for the process. The platform must be flexible and managed by someone reactive and capable of fixing bugs and adapt to new demands. Ideally the platform should be intuitive and easy to navigate for anyone.

Regarding the tools, consider the possibility of organizing regular Google Hangout sessions with Parliament members or civil servants or other officials and the crowd during the process.

For deliberative purposes, the Deliberatorium software designed by Mark Klein and Cie at MIT might be a good fit. It's a tool that lets participants organize their entry per issue/idea/argument. This way what would be 13 pages of scattered and path-dependent content becomes one page of structured arguments, with no redundancy of ideas and a clear visibility of minority voices (no scattered content, soap box issue, flawed argumentation) –assuming that the participants organize their entries in a consistent and logical manner. This model allows finding the good stuff in all the noise. People should also be able to post pictures, videos and other materials.

Other tools worth considering and possibly combining include the following software: IdeaScale (idea crowdsourcing and deliberation), LiquidFeedback (issues&initiatives); Problems&Proposals (within open DCN) (problems&proposals), Agora2.0, Gizmo; IdeaSpotter (Xerox), The Evidence Hub (could be a plug in to verify the substance of claims made on the platform; geo-deliberation: who thinks like me where?).

Use existing tools if possible. Do not rush to build new tools for crowdsourcing. There's absolutely no need to reinvent the wheel. Using existing tools will save you money and time. Building a robust, modern and well-designed crowdsourcing tool is expensive. As elaborated in the previous sequence, there's already an array of tools. Some of them are open-sourced and free to use, some of them are charged for, some of them function on a convenient software-as-a-service basis, which means you'll get a turn-key solution delivered to you. Some of the tools we listed earlier have been used in hundreds of crowdsourcing projects and are a result of multi-year long development processes, thus providing robust services. It is recommended to start by using some of the existing tools and later, based on the lessons learned from those processes, if you might still find it necessary to build something else and beat the existing ones, go for it.

Empower people.

- Foster “ownership” of the experiment, platform and its content by the community.
- Let the crowd evaluate ideas.
- Identify the strongest members of the community and keep them engaged. Make sure to stay in somewhat close and regular contact with the community (emails suffice but phone calls are great too).
- Ask people to help you with idea categorization. One could imagine having a Wiki-style “Deliberative Map” of the problem identified, complemented by a similar document for solutions etc. Short of involving the crowd or perhaps in addition to involving it that way it will become necessary to train a specific group of people to do that work and devise procedures that standardize and automatize or at least normalize certain sorting decisions.

Measure. Make sure to have entry and exit surveys asking all relevant questions. Measure potential change, if relevant and possible in your project.

Monitor and moderate. Monitor the interactions on the platform and moderate when needed. Light moderation keeps the tone civil and constructive, more sustained monitoring and prompting favors more deliberation.

Enhance transparency. Have maximal (not necessarily total) transparency throughout both vis-à-vis participants and vis-à-vis political officials. Keep the flow of information open and circulating between crowdsourcers and participants.

Spread the word. Publicize ahead of time and throughout the process to encourage participation. The word spreads through traditional media, social media, newsletters and on online discussion forums. Think which are the communities that the crowdsourced issue relates to and reach out to them, and others.

Improve access. Make computers available in city-halls and other public spaces for people who don't have personal computers or tablets.

Give feedback to the crowd about ulterior stages of the experiment, including those that take place behind closed doors in the Parliament and other decision-making bodies.

Share lessons learned. It is important to cooperate with other governments/institutions/businesses to centralize garnered knowledge about successes and failures of crowdsourcing processes. In such recaps address the questions such as: What worked? What didn't and why? Build a national database of results of these projects. But also engage with transnational websites like Participedia and share experiment results widely.

15. Appendices

Appendix 1

Figures 1, 2, 3, 4 User-interfaces of the crowdsourcing platform.

Figure 2. Voting and keyword function in the user-interface.

Figure 3. Commenting function on the crowdsourcing platform.

Figure 4. Activity leaderboard on the crowdsourcing platform.

Figure 5. Process phases.

Figure 6. Topic areas in the first phase.

Figure 7. Second phase topic areas.

Figure 8. Finnish newspaper Turun Sanomat published an article about the crowdsourced off-road traffic law reform.

Figure 9. User-interfaces of the evaluation tool: Scoring method.

Figure 10. User-interfaces of the evaluation tool: Ranking method.

Figure 11. User-interfaces of the evaluation tool: Comparisons.

Figure 12. Learning moment on the crowdsourcing platform.

Figure 13. Learning moment on the crowdsourcing platform.

Appendix 2

Figure 14. Proposal Statistics across topics

Appendix 3

Figure 15. Proposal Statistics by category

Appendix 4

Figure 16. MinorityComparison

All appendices are available at <http://bit.ly/197CenL>

16. References

Aitamurto, Tanja and Helene Landemore (2013). Democratic Participation and Deliberation in Crowdsourced Legislative Processes: the Case of the Law on Off-Road Traffic in Finland. 6th Conference on Communities and Technologies. Workshop: Large-Scale Idea Management and Deliberation Systems. Technische Universität München, Xerox, ACM SIGCHI.

Aitamurto, T. (2012) 'Crowdsourcing for Democracy: New Era In Policy Making', Committee for the Future, Parliament of Finland 1/2012. ISBN 978-951-53-3459-6 (Paperback), ISBN 978-951-53-3460-2 (PDF). Available from: <http://www.scribd.com/doc/118136573/Crowdsourcing-for-Democracy-New-Era-in-Policy-Making> [Accessed 2 October 2013].

Aitamurto, T., Leiponen, A. and Tee, R. (2011) 'The Promise of Idea Crowdsourcing - benefits, contexts, limitations', Whitepaper for Nokia Ideas Project, (2011) Available from: <http://www.crowdsourcing.org/document/the-promise-of-idea-crowdsourcing--benefits-contexts-limitations/5218> [Accessed 2 October 2013].

Anderson, R.E. (1992) 'Social impacts of computing: Codes of professional ethics', *Social Science Computing Review*, 10 (2), 453-69.

Brabham, D. (2008) 'Crowdsourcing as a Model for Problem Solving: an introduction and cases', *Convergence: The International Journal of Research into New Media Technologies*, 14 (1), 75-90.

Brabham, D. (2010) 'Moving the crowd at Threadless', *Information, Communication and Society*, 13 (8), 1122-45.

Buhrmester, M., Kwang, T. and Gosling, S.D. (2011) 'Amazon's Mechanical Turk: A new source of inexpensive yet high-quality data?' *Perspectives on Psychological Science*, 6, 3-5.

Cohen, J. (1989) 'Deliberation and democratic legitimacy', in A. Hamlin and P. Pettit (eds.), *The Good Polity*. New York: Basil Blackwell, pp. 17-34.

Convertino G., Sandor A. and Baez M. 2013. [Idea Spotter and Comment Interpreter: Sensemaking tools for Idea Management Systems](#). Presented at the ACM Communities and Technologies Workshop: Large-Scale Idea Management and Deliberation Systems Workshop.

Dos Santos, B. (1998) 'Participatory Budgeting in Porto Alegre: Toward a Redistributive Democracy', *Politics & Society*, 26, 461-510.

Estelles-Arolas, E., & Ladrün-de-Guevara, F. (2012). Towards an integrated crowdsourcing definition. *Journal of Information Science*, 38, 189–200.

The European Citizens' Initiative (2013) Official Register, Open Initiatives [online]. The European Commission. Available from: <http://ec.europa.eu/citizens-initiative/public/initiatives/ongoing> [Accessed 3 October 2013]

Faria, Christiano Ferri. 2013. "The open parliament in the age of the internet: can the people now collaborate with legislatures in lawmaking?" *Câmara dos Deputados, Edições Câmara*. Available here: <http://bd.camara.leg.br/bd/handle/bdcamara/12756> [Last accessed October 16, 2013]

Fishkin, J. (2009) *When the People Speak: Deliberative Democracy and Public Consultation*. Oxford: Oxford University Press.

Garsten, B. 'Representative Government and Popular Sovereignty'. Unpublished article.

Gastil, J. and Dillard, J. P. (1999) 'Increasing political sophistication through public deliberation', *Political Communication*, 16, 3–23.

Goodin, R. (2005) 'Sequencing deliberative moments', *Acta Politica*, 40, 182–96.

Gustavsen, B. 2001. *Theory and Practice: The Mediating Discourse*. In *Handbook of Action Research. Participative Inquiry and Practice*. Eds. Peter Reason and Hilary Bradbury-Huang. 27–37. London: Sage.

Habermas, J. (1989) *The Structural Transformations of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Cambridge: MIT Press.

Howe, J. (2008) *Crowdsourcing: why the power of the crowd is driving the future of business*. New York: Crown Business.

Iandoli, L., Klein, M. and Zollo, G. (2009) 'Enabling On-Line Deliberation and Collective Decision-Making through Large-Scale Argumentation: A New Approach to the Design of an Internet-Based Mass Collaboration Platform', *International Journal of Decision Support System Technology*, 1 (1).

Jeppesen, L.B. and Lakhani, K. R. (2010) 'Marginality and Problem-Solving Effectiveness in Broadcast Search', *Organization Science*, 21, 1016-33.

Kozinets, R. (2002) 'The Field behind the Screen: Using the Method of Netnography to Research Market-oriented Virtual Communities', *Journal of Consumer Research*, 39, 61–72.

- Ladkin, D. 2004. "Action Research." In Clive Seale (ed.) *Qualitative Research Practice*. London: Sage.
- Landemore, H. (2013a) *Democratic Reason: Politics, Collective Intelligence, and the Rule of the Many*. Princeton NJ: Princeton University Press.
- Landemore, H. (2013b) "Inclusive Constitution-Making: The Icelandic Experiment." Under review.
- Landemore, H. (forthcoming) *Tilraunir með lýðræði – Ísland í kreppu og endurreisn*. Jón Ólafsson ritstj. Reykjavík: Háskólaútgáfan & Háskólinn á Bifröst, 2014.
- (In English: *Experiments in Democracy – Iceland in crisis and recovery*. Jón Ólafsson ed. Reykjavík: University of Iceland Press & Bifröst University, 2014.
- Landemore, H. and Mercier, H. (2012) 'Talking It Out with Others vs. Deliberation within and the Law of Group Polarization: Some Implications of the Argumentative Theory of Reasoning for Deliberative Democracy', *Analise Social*, 205, xlvii (4.^o), 910-34.
- Landemore, H. and Page, S.E. (2013) 'Deliberation and Disagreement: Problem solving, Prediction, and Positive Dissensus'. Paper presented at the annual MPSA convention Chicago, April.
- Lessig, Lawrence. 2011. *Republic, Lost: How Money Corrupts Congress—and a Plan to Stop It*. New York: Hachette Book Groups.
- Levinson, Sanford. 2012. *Framed: American's 51 Constitutions and the Crisis of Governance*. Oxford: Oxford University Press.
- Lindlof, T. R., & Taylor, B. C. (2002). *Qualitative communication research methods*. Thousand Oaks, CA: Sage.
- Mansbridge, J. (1992) 'A Deliberative Perspective on Neocorporatism.' *Politics and Society*, 20 (4), 493-505.
- Mansbridge, J. (2010) 'Deliberative Polling as the Gold Standard', *The Good Society*, 19 (1), 55-62.
- Mercier, H. and Landemore, H. (2012) 'Reasoning is for Arguing: Explaining the Successes and Failures of Deliberation', *Political Psychology*, 33, 243-58.
- Mutz, D. (2006) *Hearing the Other Side: Deliberative versus Participatory Democracy*. Cambridge: Cambridge University Press.
- Parkinson, J. and Mansbridge, J. (2012) *Deliberative Systems: Deliberative Democracy at the Large Scale*. Cambridge: Cambridge University Press.

Poetz, M.K. and Schreier, M. (2011) 'The value of crowdsourcing: Can users really compete with professionals in generating new product ideas?' *Journal of Product Innovation Management*, 29 (2), 245-56.

Risse, T. (2000) 'Let's Argue! Communicative Action in World Politics', *International Organization*, 54, 1-39.

Strauss, A., and Juliet C. (1998) *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, second edition. Thousand Oaks, CA: Sage.

Yu, H. and Robinson, D. (2012) 'The New Ambiguity of Open Government', *UCLA Law Review Discourse*, 49, 179-208.



PARLIAMENT
OF FINLAND

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Maastoliikennelaista.
About off-road traffic

Koti | Jatkokeskustelun aiheita | Ihmetteletkö tätä? | Yhteystiedot | Ideahaku | Hae

Tervetuloa Joukkoistamista Suomessa -yhteisöön!

Tervetuloa keskustelemaan maastoliikenteestä ja sitä säätelevästä maastoliikennelaista. *Welcome to discuss about off-road traffic and the law regulating it.*
What is this about? What will happen now? How does this work? Instructions

Mistä on kysymys? Mitä nyt tapahtuu? Miten tämä toimii? Ohje

Mistä on kysymys? What is this process about?

Ympäristöministeriö uudistaa maastoliikennelakia ja haluaa siksi kuulla mahdollisimman laajasti näkemyksiä asiasta. Maastoliikenteellä tarkoitetaan mm. moottorikelkkailua ja mönkijälläajoa luonnossa. Laki säätelee esimerkiksi sitä, missä moottorikelkalla saa ajaa ja kuinka kelkkareittejä perustetaan. Lisää maastoliikenteestä ja nykyisestä laista voit lukea [maastoliikennelaki-sivustolla](#).

Vaikuta! Have a say!

Pyydämme sinua jakamaan ajatuksesi siitä, kuinka maastoliikennettä pitäisi parhaiten säännellä. Kysymykset perustuvat edellisen vaiheen keskusteluun. Etsimme nyt ratkaisuja maastoliikenteen ja sen sääntelyn ongelmiin. Osallistu valitsemalla kysymyskategoria vasemmalta palkista. Klikkaa sitten keltaista 'Lähetä idea' -nappulaa. Ideointi jatkuu 21.6. asti.

1. vaihe: Keskustelu → 2. vaihe: Koonti ja palaute → 3. vaihe: Jatkokeskustelu → 4. vaihe: Koonti ja palaute

Lähetä uusi idea *Send a new idea!*

Figure 1. User-interface of the online platform for crowdsourced off-road traffic law process.

Maastoliikennelaista.
Home Topics Are you wondering this? Contact information

Koti | Jatkokeskustelun aiheita | Ihmetteletkö tätä? | Yhteystiedot

Ideahaku Hae

Lähetä uusi idea

[Luokkien hallinta]
Aktiiviset keskustelut [Pilota]

Kaikki ideat **All ideas**

Reitit
Reittisuunnitelmien hyväksymisen perusteet Päättyy 06/21/2013
Reittien hyväksyjä Päättyy 06/21/2013
Reittisuunnitelman sisältö Päättyy 06/21/2013
Reittisuunnitelmien selvitykset Päättyy 06/21/2013
Reittien pysyvyys Päättyy 06/21/2013
Reittien ennallistaminen Päättyy 06/21/2013
Reittien sijainti Päättyy 06/21/2013
Reittien estäminen Päättyy 06/21/2013
Reittien lopettaminen Päättyy 06/21/2013
Talvireittien avaaminen

Agree
Samaa mieltä
Palautteen pisteet
+6 **2** -1

Eri mieltä
Disagree
Sijoitus listalla **276**

Idea# **441**
Ranking location

Moderoi ideaa

Energikulutuksen vähentäminen Decreasing energy consumption

Tweet 0 Like 0 sähköposti

lähetä sähköpostia kirjoittajalle Seuraa

Enduro- ja mönkijä kuntoilussa polttoaineen kulutus maastoajossa on hyvin pieni. Enduropyörällä 5L kuluttaminen maastoajossa vaatii yli 1000kcal kuljettajalta hikeä.

Niinpä on oleellista, että enduro- ja mönkijäreittejä on riittävästi lähellä asutusta. Maastoajopelin kuljettaminen pakettiautolla tai peräkärryssä 20km päähän vie enemmän polttoainetta kuin itse kuntoiluharrastus.

Eniten energiaa säästyy, kun reitit ovat taajamissa tai ainakin maastosiirtymäreitit alkavat taajamista.

Esim uudelle teollisuusalueelle voisi hyvin kaavoittaa ensin enduroreitistön ja sitten teollisuuden. Muutaman puun ja puskan takana kulkeva reitti ei teollisuutta haittaa, kun maastoreitti on hyväksytyksi kartalla.

Lisäksi luonnon rauhan takia maasto-kuntoilu on järkevintä tehdä muun tohinan ja touhun lähellä. Maastokuntoiluaajan melu on paljon pienempää kuin maantien tai kadun melu.

Avainsanat: energia maastokuntoilu enduro **Keywords**

Lisää avainsanoja
Review Translation
Kommentoi

Kirjoittanut Reijo Karppinen 6 päivää sitten

Leave a comment
Written by user 'Reijo Karppinen' 6 days ago

Figure 2. Voting and keyword function in the user-interface.

Idea category: Limitations to noise and pollution emissions

Idea headline: Distance to homes and yards

Samaa mieltä MELU- JA PAKOKAASUHAITTOJEN RAJOITTAMINEN Moderoi idea

Pääsurlteen pisteet **36**

Eri mieltä

Sijotus listalla 26

Idea# **382**

Etäisyys pihoihin ja koteihin

minimietäisyydet pihoihin, karjasuojiin ja taloihin, jota lähemmäksi niitä ei saa perustaa, ilman omistajien suostumusta.

Avainsanat: minimietäisyys

[Lisää avainsanoja](#) [Review Translation](#) [Kommentoi](#)

Kirjoittanut Yhteisön jäsen 1 kk sitten

Äänestystoiminto Näytä

(latest 20 votes)

Samanlaisia ajatuksia Näytä

Yhteisön jäsen sanoi: POISTA

Reitti on tietenkin pyrittävä rakentamaan mahdollisimman kauas asutuksesta. Maastossa on kuitenkin kapeikoita joissa reitin joutuu vetämään asutuksen läheltäkin, joten täsmällisiä metrimääriä ei voi antaa. Linjaus pitää ratkaista aina paikallisesti ja suunnittelijalle voi antaa vain suunnitteluperiaatteita. Esimerkiksi huoltoasemat ovat usein asutuksen keskellä ja sinnekin on päästävä. Pitää siis valita pienimmän haitan tie. Usein asutuksen läpiseeminen kannattaa tehdä tien vierä tai pienempiä teitä pitkin, koska ihmiset ovat totuneet liikenteen meluun juuri tien suunnasta.

Vote for and vote against

[Review Translation](#) 17 päivää sitten 0 Äänestä puolesta 0 Äänestä vastaan

Yhteisön jäsen sanoi: POISTA

Kelkkareitin etäisyys pihasta ja karjasuojista saisi olla ainakin 200m. Ei saunarantaankaan ole soveliaista mennä kalastamaan 100m lähemmäs ja tästä ei edes aiheudu meluhaittaa. Ennen kaikkea reitin perustamiseen on saatava maanomistajan suostumus.

[Review Translation](#) [Vastaa](#) 5 Äänestä puolesta 1 kk sitten 1 Äänestä vastaan

Yhteisön jäsen sanoi: POISTA

Jos reitti kulkee avoimella alueella niin että ääni kantaa kauas etäisyys pitää olla suuri vaikka 2 km. Jos taas reitti kulkee tiheässä metsässä niin muutaman sadan metrin etäisyys saattaa riittää.

[Review Translation](#) [Vastaa](#) 2 Äänestä puolesta 1 kk sitten 0 Äänestä vastaan

Roitema Roitema sanoi: POISTA

Etäisyys on kuin veteen piirretty viiva. Tervettä järkeä ja olosuhteet huomioon ottaen, tulee tässä kohdassa toimia.

[Review Translation](#) [Vastaa](#) 3 Äänestä puolesta 1 kk sitten 0 Äänestä vastaan

Yhteisön jäsen sanoi: POISTA

Ei sitä voi lakiin noin ylimalkaisesti kirjata. Selkeä metrimäärä minimissään 200m metsämaastossa, 500m avomaastossa.

[Review Translation](#) 1 kk sitten 3 Äänestä puolesta 1 Äänestä vastaan

Yhteisön jäsen sanoi: POISTA

Moottonkelkkailuun liittyviä suomalaisia suunniteluohjeita ovat seuraavat:

- Moottonkelkkailureittien suunnittelu ja ympäristövaikutukset (Herva 2000). Ohjeessa käydään läpi reittien yleissuunnitteluun ja yksityiskohtaisempaan suunnitteluun liittyvät näkökohdat. Meluun liittyen oppaassa todetaan mm.:
 - riittävät suojaetäisyydet suurten peltointujen pesimisympäristöihin (vähintään 1 km) ja metsan soina-alueisiin (vähintään 300 m)
 - porojen vasomis- ja talvilaidunalueet
 - etäisyys asutukseen kaava-alueiden ulkopuolella vähintään 100 metriä, mikäli reitti voidaan sijoittaa maastoon "vapaasti"
 - tiiviisti muodostetulla kaava-alueella loma-asunnot tulisi sivuuttaa niin, että etäisyys moottonkelkkareittiin on vähintään 50 metriä
 - Kittilässä ympäristöautokunta on määrännyt rakennuskaava-alueilla kulkeville moottonkelkkareiteille 30 km/h nopeusrajoituksen
- Moottonkelkkailureitin perustaminen (Tallgren 1999). Painottuu moottonkelkkareitin perustamistapamennettelyn kuvaamiseen. Lainsäädännön ohella kuvattu

Figure 3. Commenting function on the crowdsourcing platform.

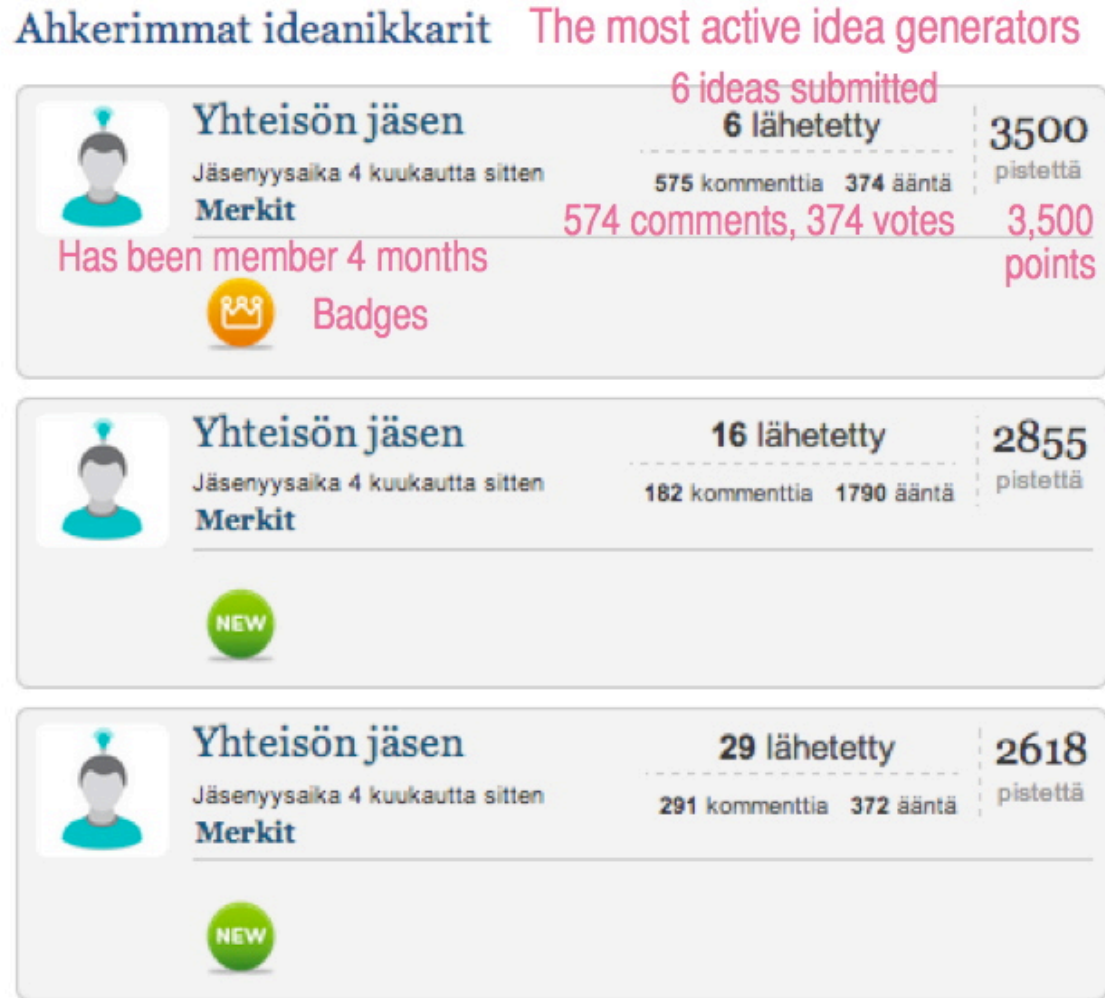


Figure 4. Activity leaderboard on the crowdsourcing platform.

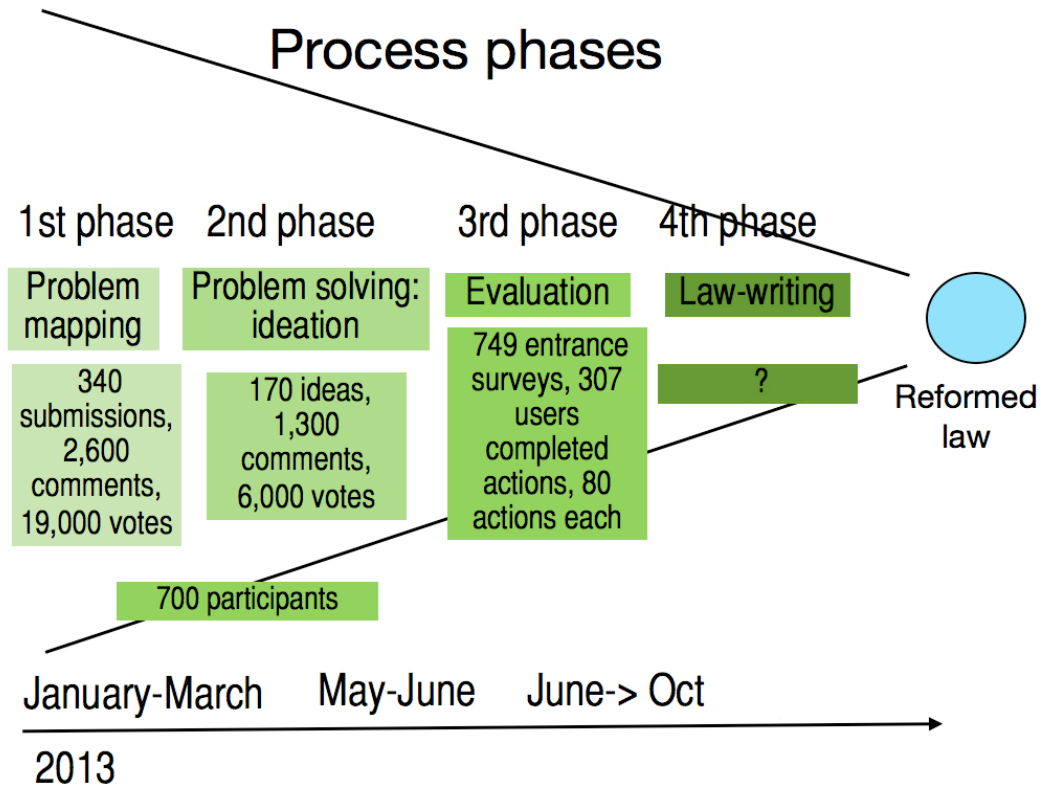


Figure 5. Process phases.

Maastoliikennelain uudistaminen

Maastoliikenteen ongelmat

Päättyi 04/01/2013

Päätökset kunnalta valtiolle?

Päättyi 04/01/2013

Ikärajan sääntely Päättyi 04/01/2013

Moottorikelkkareittien perustaminen

Päättyi 04/01/2013

Moottorikelkkareittien perustaminen

2 Päättyi 04/01/2013

Maastoliikennereittien perustaminen

Päättyi 04/01/2013

Maastoliikenteen ympäristöhaitat

Päättyi 04/01/2013

Saamelaiden oikeudet

Päättyi 04/01/2013

Moottorikelkkaurien sääntely

Päättyi 04/01/2013

Maastoliikenneajoneuvojen rekisteröinti Päättyi 04/01/2013

Ehdota keskustelunaihetta!

Päättyi 04/01/2013

Figure 6. Topic areas in the first phase.

	<p>Turvallisuus Turvallisuuden parantaminen <i>Päätyi 06/24/2013</i></p> <p>Turvallinen siirtymäliikenne <i>Päätyi 06/24/2013</i></p>	
	<p>Luonto ja ympäristö Kielletyt kelkkailualueet <i>Päätyi 06/24/2013</i></p> <p>Luonnon suojeleminen <i>Päätyi 06/24/2013</i></p> <p>Melu- ja pakokaasuhaittojen rajoittaminen <i>Päätyi 06/24/2013</i></p>	
<p>Reitit Reittisuunnitelmien hyväksymisen perusteet <i>Päätyi 06/24/2013</i></p> <p>Reittien hyväksyjä <i>Päätyi 06/24/2013</i></p> <p>Reittisuunnitelman sisältö <i>Päätyi 06/24/2013</i></p> <p>Reittisuunnitelmien selvitykset <i>Päätyi 06/24/2013</i></p> <p>Reittien pysyvyys <i>Päätyi 06/24/2013</i></p> <p>Reittien ennallistaminen <i>Päätyi 06/24/2013</i></p> <p>Reittien sijainti <i>Päätyi 06/24/2013</i></p> <p>Reittien estäminen <i>Päätyi 06/24/2013</i></p> <p>Reittien lopettaminen <i>Päätyi 06/24/2013</i></p> <p>Talvireittien avaaminen kesäliikenteelle <i>Päätyi 06/24/2013</i></p> <p>Ruotsin vapaa malli Suomeen? <i>Päätyi 06/24/2013</i></p> <p>Kustannukset <i>Päätyi 06/24/2013</i></p> <p>Siirtymä uuteen lakiin <i>Päätyi 06/24/2013</i></p>	<p>Tiedonhankkiminen, käyttö Osapuolten kuuleminen, tiedon avoimuus <i>Päätyi 06/24/2013</i></p> <p>Tiedonkerääminen ja -saanti <i>Päätyi 06/24/2013</i></p> <p>Päättäjät ajantasalla <i>Päätyi 06/24/2013</i></p> <p>Lain tulkinta ja valvonta Lain yhdenmukainen tulkinta <i>Päätyi 06/24/2013</i></p> <p>Lain toimeenpanon valvonta <i>Päätyi 06/24/2013</i></p> <p>Yhteiskunnan arvot Energiankulutuksen vähentäminen <i>Päätyi 06/24/2013</i></p> <p>Verkkovalmistelun kehittäminen Verkkovalmistelun kehittäminen <i>Päätyi 06/24/2013</i></p> <p>Ehdota aihetta! Ehdota aihetta! <i>Päätyi 06/24/2013</i></p>	<p>Valvonta Rikkomuksista rankaiseminen <i>Päätyi 06/24/2013</i></p> <p>Maastoliikenteen valvonta <i>Päätyi 06/24/2013</i></p> <p>Säännöt ja oikeudet Lappiin erilaiset säännöt? <i>Päätyi 06/24/2013</i></p> <p>Saamelaisten oikeudet <i>Päätyi 06/24/2013</i></p> <p>Maanomistajien oikeudet <i>Päätyi 06/24/2013</i></p> <p>Tiedonsaanti ja muutoksenhakuoikeudet <i>Päätyi 06/24/2013</i></p> <p>Korvaus maanomistajille <i>Päätyi 06/24/2013</i></p> <p>Maanomistajille aiheutuvan haitan suuruus <i>Päätyi 06/24/2013</i></p> <p>Ammattikäytön sääntely <i>Päätyi 06/24/2013</i></p>

Figure 7. Second phase topic areas.

Maastoliikennelaki kirvoitti eripuraa sijaan ajatustenvaihtoa



KOTIMAA | Turun Sanomat 4.8.2013 07:11 [Suosittele](#) 3

– Tämä on lainsäädännössä paras idea pitkään aikaan, sanoo rovaniemeläinen Mikko Vanhatapio.

Moottoriharrastaja ja safariopas iloitsee siitä, että tavalliset kansalaiset ovat saaneet ensi kertaa sanoa, mitä mieltä ovat maastoliikennelaista. Vanhatapio on sitä mieltä, että moottorikelkkareitit pitäisi avata mönkijöille siltä osin kuin niistä ei ole kohtuutonta haittaa. Hänen mukaansa laillisten ajopaikkojen puute johtaa laittomaan ajeluun.

– Jos valtion mailla on keskellä metsää jängällä mönkijän ura, en ymmärrä miksi se haittaisi ketään. Vanhatapio toteaa.

Figure 8. Finnish newspaper Turun Sanomat published an article about the crowdsourced off-road traffic law reform.

Pisteytys

Arvioi ideoita

2 / 102 arvioitu

Pisteytä. [Ohje](#)

Kysymys

Reittien perustaminen. Kuinka voitaisiin parhaiten säädellä mahdollisuudesta perustaa maanomistajan maalle moottonikkelkareitti, vaikka maanomistaja olisi reittiä vastaan?

Ideat

Ei tulisi olla mahdollista perustaa reittiä yksityismaille ilman maanomistajan suostumusta. Maanomistajilla tulisi olla lopullinen hallintaoikeus omaisuutensa suhteen. [\[Lisää tietoa\]](#)

Arvioi idea valitsemalla sopiva määrä tähtiä.

★★★★☆

[Valmis](#)

Figure 9. User-interfaces of the evaluation tool: Scoring method.

Järjestäminen

Arvioi ideoita

7 / 102 arvioitu

Järjestä. Ohje

Kysymys

Reittien perustaminen. *Kuinka voitaisiin parhaiten säädellä mahdollisuudesta perustaa maanomistajan maalle moottorikelkkareitti, vaikka maanomistaja olisi reittiä vastaan?*

Ideat

[Vedä minua] Ei tulisi olla mahdollista perustaa reittiä yksityismaille ilman maanomistajan suostumusta. Maanomistajilla tulisi olla lopullinen hallintaoikeus omaisuutensa suhteen. [\[Lisää tietoa\]](#)

[Vedä minua] Tulisi olla mahdollista perustaa reitti yksityismaille ilman maanomistajan suostumusta, mutta ainoastaan, jos reitti ei aiheuta haittaa maanomistajalle. [\[Lisää tietoa\]](#)

[Vedä minua] Tulisi olla mahdollista perustaa reitti yksityismaille, mutta reitin tarve tulisi oikeuttaa painavammalla syyllä kuin yleisen liikenneyhteyden luomisella tai yleisellä virkistyskäytöllä. [\[Lisää tietoa\]](#)

[Vedä minua] Nykyisessä laissa tulisi olla tiukemmat ja selvemmat kriteerit, joiden perusteella maanomistajan tahto voidaan ohittaa, kun uusia reittejä perustetaan. [\[Lisää tietoa\]](#)

[Vedä minua] Tulisi olla mahdollista perustaa reitti yksityismaille ilman maanomistajan lupaa, kun on tarvetta perustaa reitti. [\[Lisää tietoa\]](#)

[Valmis](#)

Figure 10. User-interfaces of the evaluation tool: Ranking method.

Vertailu

The screenshot shows a web interface titled "Arvioi ideoita" (Evaluate ideas). At the top, it indicates "11 / 102 arvioitu" (11 / 102 evaluated). Below this, there are two tabs: "Vertaa" (Compare) and "Ohje" (Instructions). The "Vertaa" tab is active and displays a comparison between two ideas. The first idea is titled "Kysymys" (Question) and asks "Reittien perustaminen. Miten reittien ja urien ylläpito voitaisiin parhaiten järjestää?" (Route establishment. How can the maintenance of routes and trails be best organized?). The second idea is titled "Ideat" (Ideas) and contains two columns of text. The left column discusses the responsibility for maintaining routes on growing areas, and the right column discusses organizing maintenance so that at least in Southern Finland, cycling clubs and municipalities would cooperate to reduce maintenance costs. Below each idea is a blue button labeled "Parempi idea" (Better idea).

Arvioi ideoita

11 / 102 arvioitu

Vertaa Ohje

Kysymys

Reittien perustaminen. Miten reittien ja urien ylläpito voitaisiin parhaiten järjestää?

Ideat

Reittien reunoilla kasvavasta pusikosta tulisi pitää huolta ja lain tulisi selvästi osoittaa, kenen velvollisuus se on.

Ylläpito tulisi järjestää niin, että ainakin Etelä-Suomessa kelkkailukerhojen ja kuntien tulisi tehdä yhteistyötä alentaakseen ylläpitokustannuksia. [\[Lisää tietoa\]](#)

Parempi idea Parempi idea

Figure 11. User-interfaces of the evaluation tool: Comparisons.

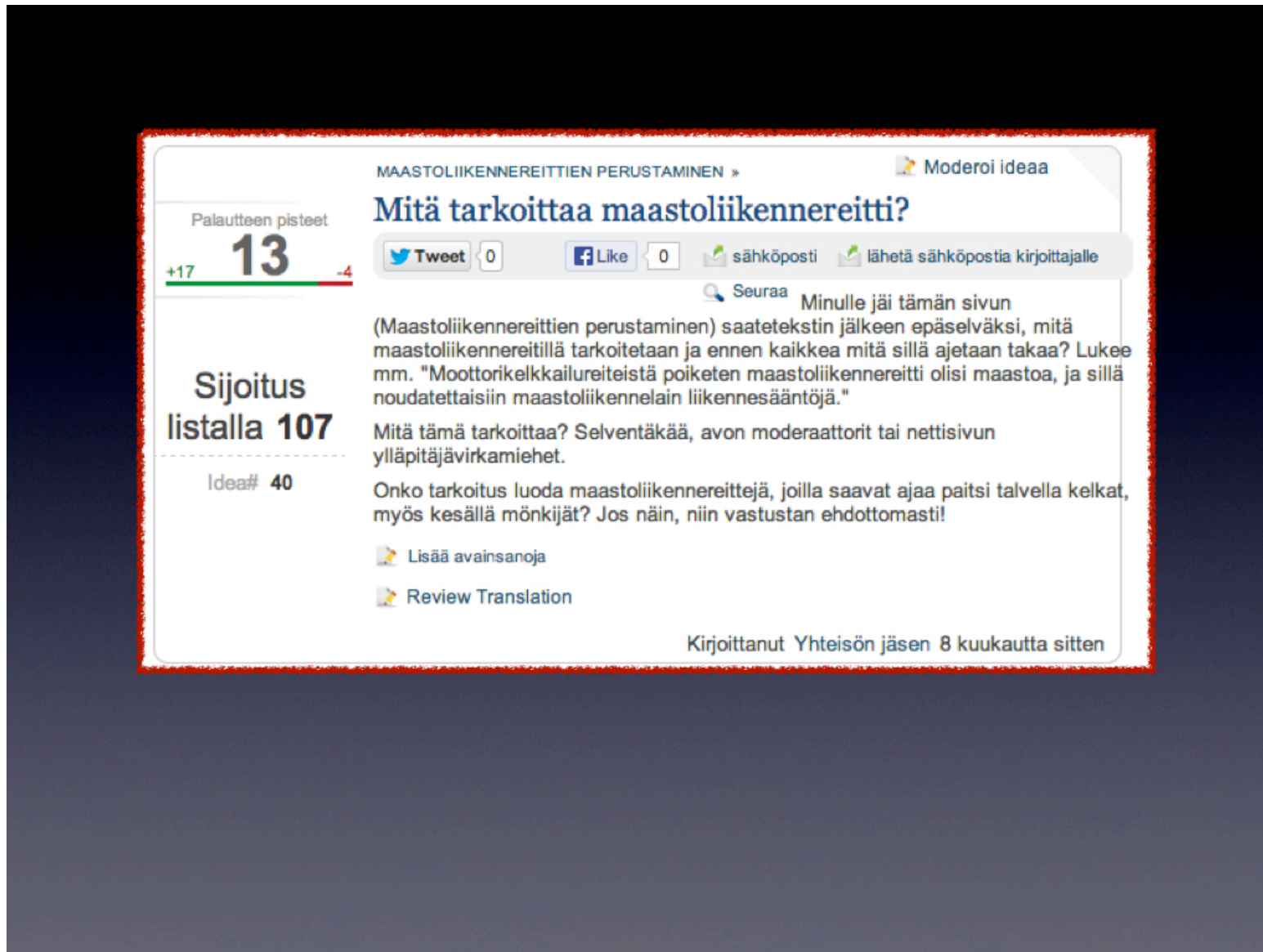



Figure 12. Learning moment on the crowdsourcing platform.

Kommentoi (5) Kommenttien lajittelu Päivämäärä



JMi sanoi: [POISTA](#)

Maastoliikennereitti on kesäreitti ja moottorikelkkareitti on talvireitti. Ne eivät välttämättä ole samassa paikassa vaikkapa märän maaston vuoksi, mutta likimain vieretysten ne voivat olla. Sen vieressä on sitten metsäautotie ja kaksi sähkölinjaa. Seuraavaksi on sitten maantie. Omaa metsää ei sitten ole ollenkaan tämän jälkeen. Ehkä toisten maata saa liian helposti.

[Review Translation](#)

8 kuukautta sitten [Vastaa](#) 👍 2 Äänestä puolesta 👎 0 Äänestä vastaan




Sinä sanoi: [POISTA](#)

Hei, lisää tietoa maastoliikennereiteistä on täällä: <http://maastoliikennelaki.fi/nykytilanne/>, kohdassa maastoliikennereitit. Löytykö etsimäsi tieto tuolta? Jos ei, niin etsin vielä lisää.

[Review Translation](#)

8 kuukautta sitten [Vastaa](#) 👍 1 👎 0



Idea Lähettäjä [POISTA](#)

Okei, tuolla em. linkissä todetaan näin:

"Maastoliikennelaisissa määriteltäisiin moottorikelkkailureitin lisäksi nyt myös muiden moottorikäyttöisten maastoajoneuvojen liikennettä varten tarkoitettu reitti, joka nimettäisiin maastoliikennereitiksi.


Taustalla on mönkijöiden määrän voimakas lisääntyminen; mönkijöitä on pian enemmän kuin moottorikelkkoja. Mönkijöiden käyttö maastossa pyritään ohjaamaan suunnitelluille reiteille."

Eli on tosiaan tarkoitus luoda reittejä, joilla saavat ajaa talvella kelkat ja kesällä mönkijät. Vastustan tällaista ilman muuta. Kelkoissa on paljon huonoja puolia, mutta niistä ei sentään juuri jää eroosiota maastoon. Mönkijöistä jää pahat jäljet ja ne näkyvät kauan.

Miksi ihmeessä pitäisi saada ajella mönkijöillä pitkiä reittejä maastossa? Onhan tieverkosto ja autot keksitty niille, jotka haluavat moottoreita päristellä. Eikö se mönkijäkin ole työkäyttöön alun perin suunniteltu? Näppärä polttopuiden tai kaadetun hirvenruhon haussa, hyvä että on sellaisiin apuvälineenä. Mutta huvijalla nyt sellaisella!

[Review Translation](#)

8 kuukautta sitten [Vastaa](#) 👍 4 Äänestä puolesta 👎 2 Äänestä vastaan



Yhteisön jäsen sanoi: [POISTA](#)

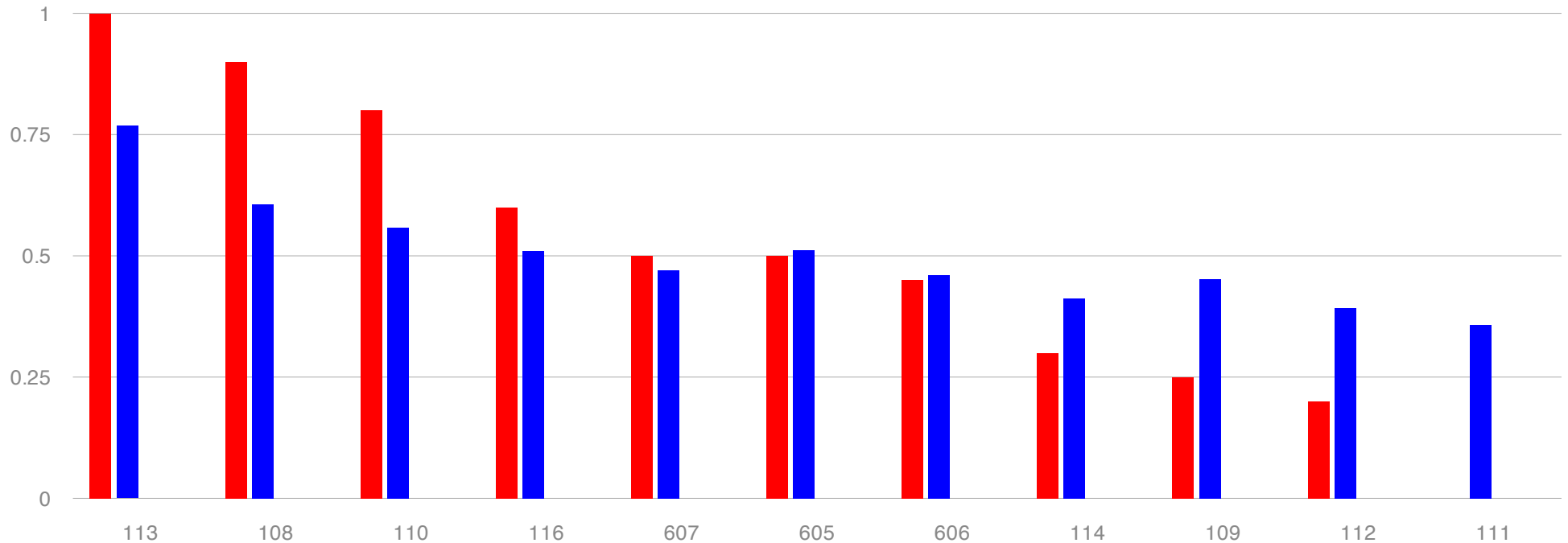
Perusero kaiketi on, että moottorikelkkareitti määritellään tielikennelaisissa ja siellä noudatetaan tielikennelakia. Virallisen moottorikelkkareitin perustaminen nykyisellä järeällä menettelyllä voi sisältää myös maanlunastusta. Nykyiset "urat" voisi jatkossa tehdä moottorikelkkareiteiksi, mutta rajoitetulla käytöllä. Maastoliikennereitti taas olisi jatkossakin maanomistajan suostumuksella perustettu ilman lunastusoikeutta oleva vakinaistettu reitti, jolle reitinpitäjä (ja maanomistaja maata luovuttaessaan käytettäväksi) määrittelee kuka siellä saa ajaa. Moottorikelkkareitti ei mitenkään suoraan muutu kesällä maastoliikennereitiksi tai toisin päin.

[Review Translation](#)

Figure 13. Learning moment on the crowdsourcing platform.

Finnish off-road traffic proposal aggregation: Proposal statistics (global)

The following charts show how proposals are rated based on several metrics. Each chart represents one topic and each proposal has a set of bars representing the score of the proposal based on different metrics. The proposals are listed underneath each graph in the same order (top to bottom) as shown on the graph (left to right).



Topic

- What are the most important issues in off-road traffic law? Please organize the issue areas by grabbing a block with your mouse and dragging the blocks into your preferred order so that the most preferred one is up and the least preferred one is down.

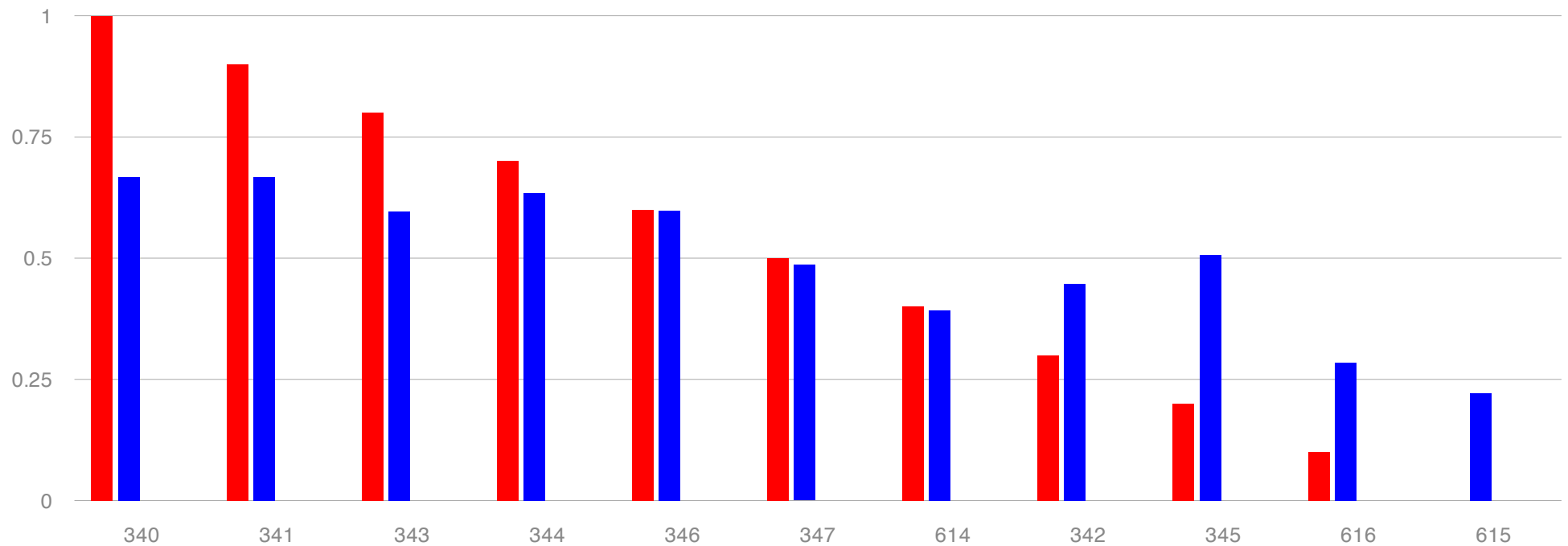
Metric Legend

- Copeland
- Borda
- Median

- Mean

Proposals

- 113: Increasing the possibilities to ride off-road traffic vehicles in Finland.
- 108: Improving safety in off-road traffic.
- 110: Regulating about route setting practices.
- 116: Enabling the professional use of off-road traffic, such as in reindeer husbandry and fishing.
- 607: Developing the preparatory process of off-road traffic law process.
- 605: Off-road traffic law and other laws. Regulation off-road traffic in other laws
- 606: Regulating about snowmobile route impact evaluations.
- 114: Decreasing the harm of off-road traffic to natural environment and to neighbors.
- 109: Decreasing illegal riding in off-road traffic.
- 112: Landowners' rights to restrict and prevent off-road traffic on their land.
- 111: Financial compensation to landowners for off-road traffic on their land.



Topic

- What do you think the other participants in this evaluation consider the most important issues in off-road traffic law? Basically, what are the

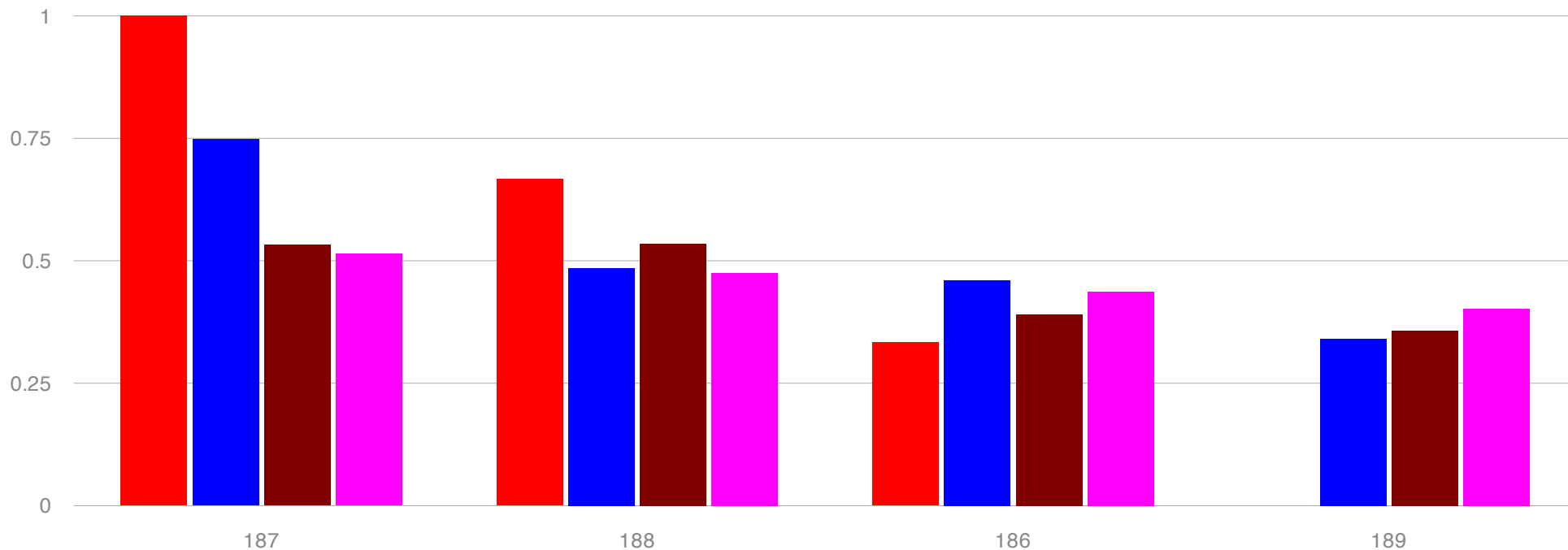
other people's preferences? Please rank the following issues according to preferences of the general public/other participants. You can organize the issue areas by grabbing a block with your mouse and dragging the blocks into your preferred order so that the most preferred one is up and the least preferred one is down.

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 340: Improving safety in off-road traffic.
 - 341: Decreasing illegal off-road traffic.
 - 343: Financial compensation to landowners for off-road traffic on their land.
 - 344: Landowners' rights to restrict and prevent off-road traffic on their land.
 - 346: Regulating the harm of off-road traffic to natural environment and to neighbors
 - 347: Enabling the professional use of off-road traffic, such as in reindeer husbandry and fishing
 - 614: Developing the preparatory process of off-road traffic law process
 - 342: Regulating snowmobile route and trail setting practices.
 - 345: Increasing the possibilities to ride off-road traffic vehicles in Finland.
 - 616: Regulating about route impact evaluations
 - 615: Off-road traffic law and other laws. Regulating off-road traffic in other laws.
-



Topic

- **Choice of the responsible authorities for deciding on new routes, gathering information on off-road traffic, and deciding on appeals for change.** What would be the best way to organize the complaint process about off-road traffic law?

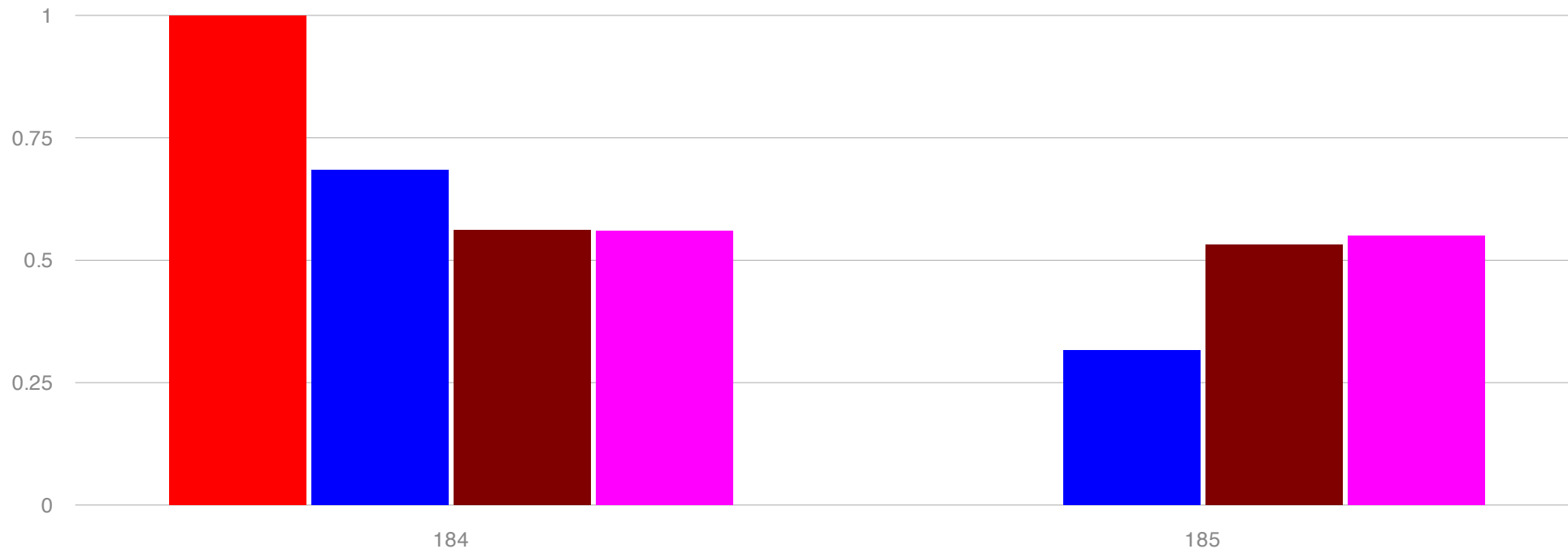
Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 187: Complaint procedures concerning routes should be more explicitly included in the off-road traffic law.
- 188: All complaints about issues related to off-road traffic law should be processed by the same administrative court (in the city of Vaasa in Finland), which already deals with environmental and water permit complaints.
- 186: Complaints concerning off-road traffic law, such as establishing new routes, should be more often responded to by administrative courts.
- 189: The right to complain about routes for off-road traffic should be extended to include more stakeholders, such as landowners, practitioners, guardians of the common good and environmental organisations. The Ministry of the Environment, ELY centres (Centre for Economic

Development, Transport and the Environment) and Metsähallitus' nature services should also have the right to complain.



Topic

- **Choice of the responsible authorities for deciding on new routes, gathering information on off-road traffic, and deciding on appeals for change.** What would be the right authority to bear the responsibility for information gathering when new routes are consider?

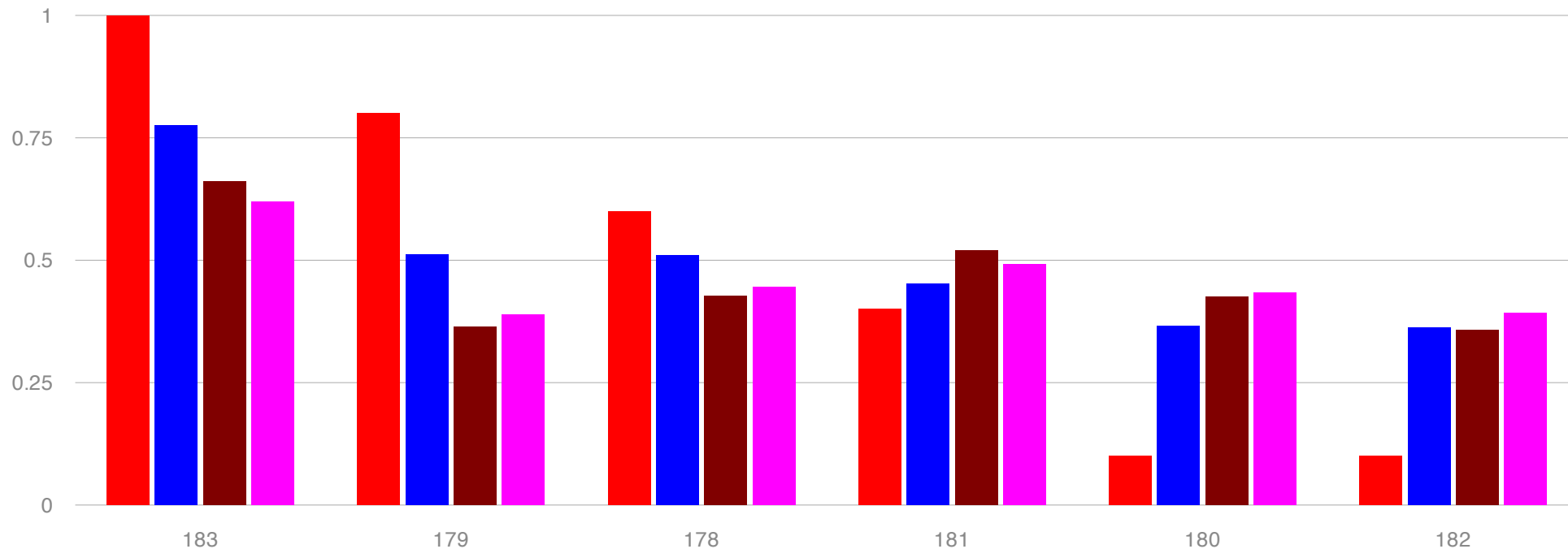
Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 184: If the municipalities remain the authority responsible for approving new routes, they should be obliged to gather basic information on off-road traffic and to monitor off-road traffic.
- 185: If the ELY centres will be responsible for making decisions on off-road traffic, then they should be in charge of gathering information on off-

road traffic.



Topic

- **Choice of the responsible authorities for deciding on new routes, gathering information on off-road traffic, and deciding on appeals for change.** What would be the right authority to decide about routes?

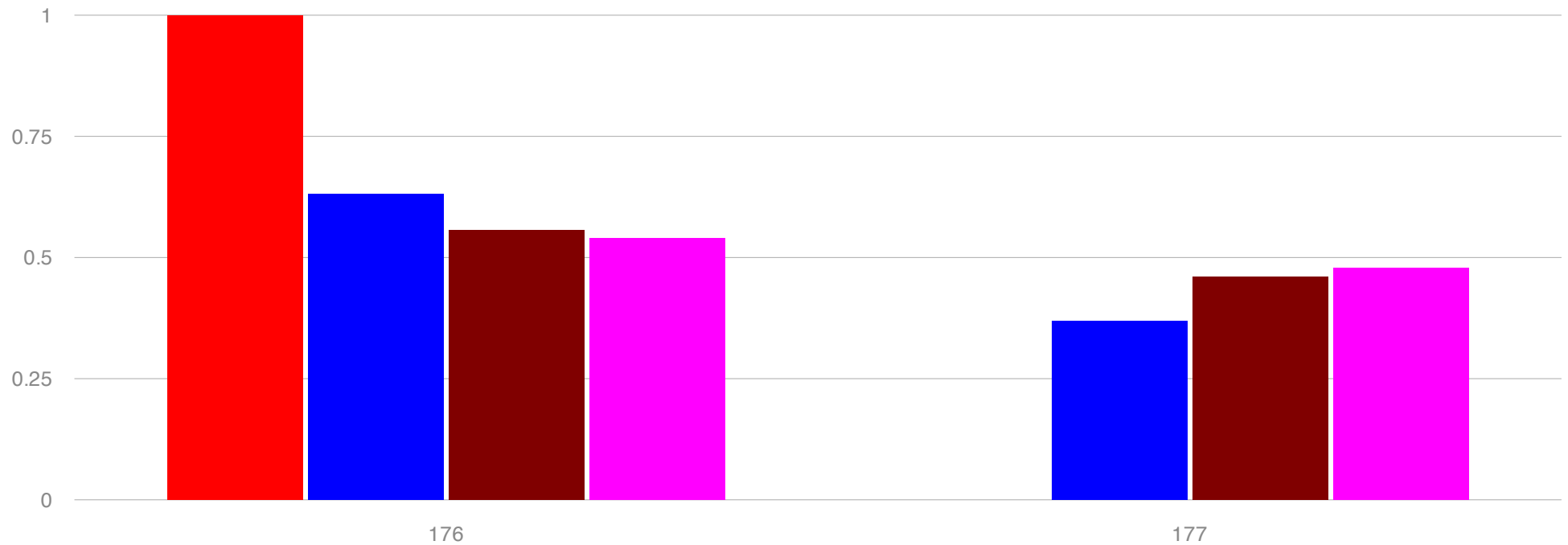
Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 183: Decision-makers of new routes should vary depending on whether the route is a small local connection or part of the national network. The local authority (municipality) would decide on local routes and a county or a national authority about wider route networks.
- 179: Decisions on establishing new routes should be made by an environmental panel in a municipality.

- 178: The municipal officials should remain the responsible authority to decide on establishing new routes.
- 181: The establishment of new routes should not be decided upon by a public authority but through private agreement between snowmobilers and landowners, and possibly via snowmobile clubs.
- 180: The ELY centres (Centre for Economic Development, Transport and the Environment) should be the responsible authority to decide on establishing new routes.
- 182: 'No-go areas' for off-road traffic should be decided upon either by the Ministry of the Environment or the Finnish Environment Institute (SYKE). 'No-go areas' refer to zones in which off-road traffic is banned.



Topic

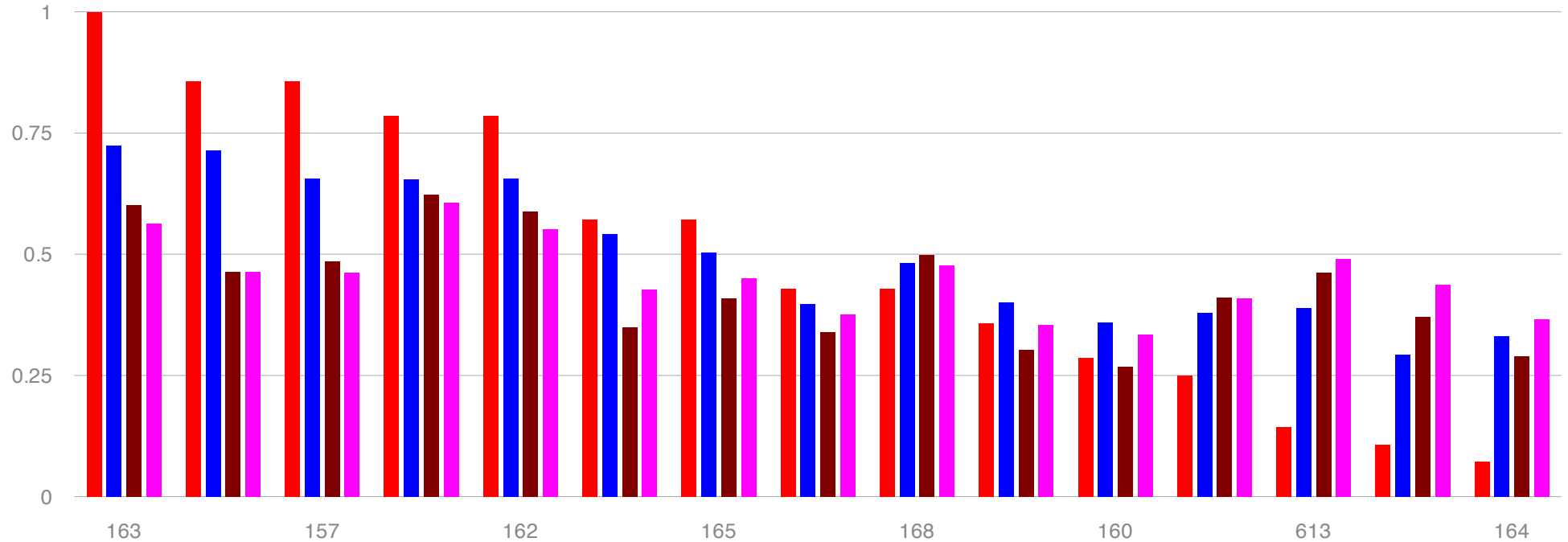
- **Establishing new routes.** How would the reconstruction of routes and trails be organized the best?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 176: Reconstruction of the natural environment (returning the natural environment to what it was like before a route was established) should be organized so that the route administrator is responsible for any harm and repairs necessary due to the route.
- 177: Reconstruction of the natural environment (returning the natural environment to what it was like before a route was established) should be organized so that the route users are responsible for any harm and repairs necessary due to the route.



Topic

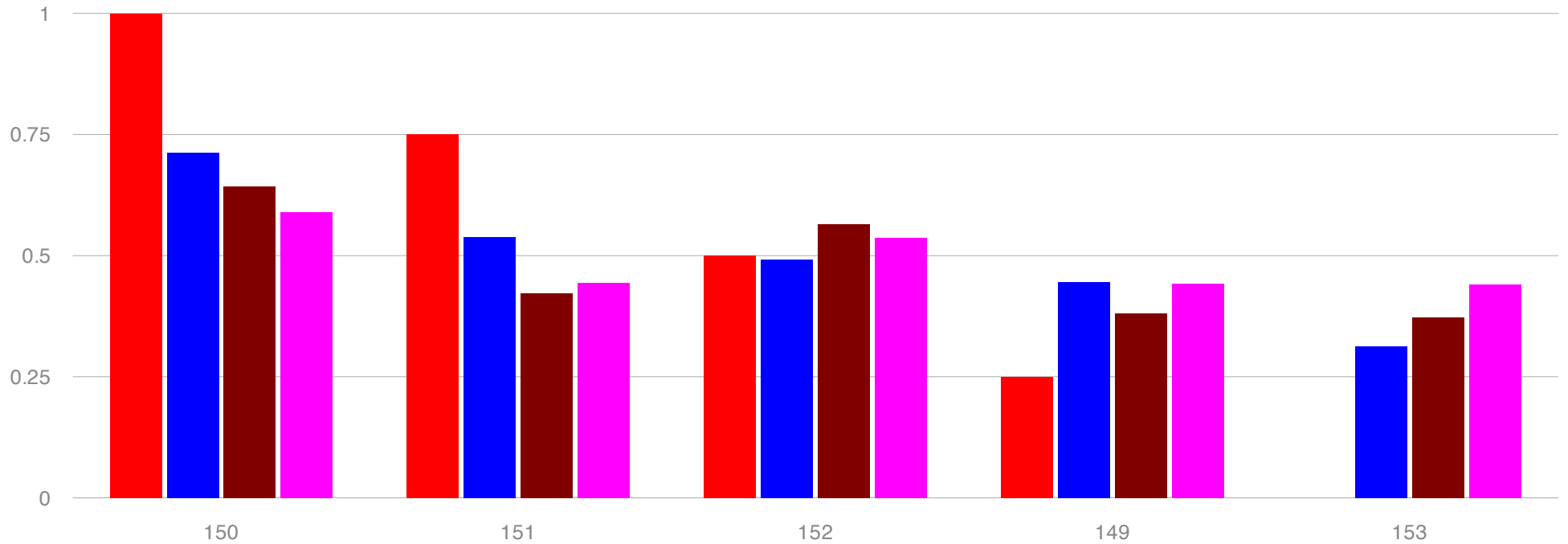
- **Establishing new routes.** What would be the best way to determine the time frame of route permits?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 163: The route plan should include a description of use and the landowner should have a right to demand an update to the route plan to correspond to the present situation or closing of the route.
 - 156: Route permits should be granted for fixed terms, i.e. the fulfillment of the permit criteria should be checked after the end of each term.
 - 157: Route permits should be granted for an unlimited time, i.e. the fulfillment of the permit criteria shouldn't be checked on a regular basis.rkastaa säännöllisesti.
 - 169: The validity of the permit criteria for a route should be regularly verified to check if they still make sense and if the route still fulfills the criteria.
 - 162: If the route does not follow the description of use that was approved in the planning phase, the landowner should have a right to demand updating the route plan to correspond to the present situation and closing of the route.
 - 159: If a route permit has been granted but the route is not created, the route permit should be annulled if the landowner requests it.
 - 165: If the effects of a route are higher than estimated in the planning phase, the route should be temporarily discontinued.
 - 158: If a route permit has been granted but the route is not created, the route permit should be automatically annulled.
 - 168: Route permits should be granted for fixed terms and if no renewal application is submitted, the route expires. The land monitoring agency would have a register of all routes and notify the permit holder when the route permit is about to expire.
 - 161: If a route permit has been granted but the feasibility of the route plan is not inspected on a yearly basis, the route permit should be annulled at the landowner's request.
 - 160: If a route permit has been granted but the feasibility of the route plan is not inspected on a yearly basis, the route permit should be automatically annulled.
 - 167: Regardless of whether or not route permits are granted for fixed terms or an unlimited time, the landowner should have the right to continue or discontinue the agreement on which the permit is based.
 - 613: Permits for off-road traffic competitions and trainings should have to be renewed yearly
 - 166: The landowner should have a right to close a route with a 6-months advance notice.
 - 164: If a route is misused, the landowner should have the right to close the route without advance notice.
-



Topic

- **Establishing new routes.** What would be the best way to regulate about establishing a route on landowners' property even if the landowner is resisting the route?

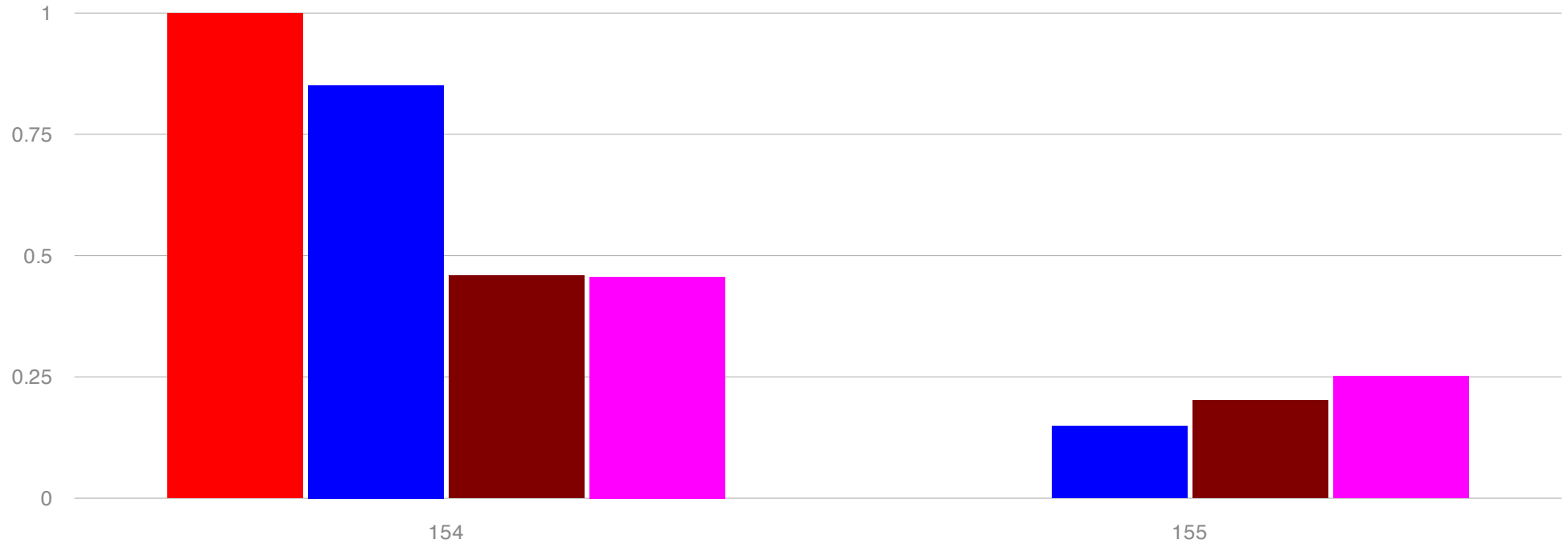
Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 150: It should be possible to establish a route on private property without the landowner's consent but only when this does not cause harm to the landowner.
- 151: It should be possible to establish a route on private property, but the need for a route should be justified by more important reasons than improving the public traffic network or common recreational use.
- 152: There should be more strict and clear criteria in the existing law for justifying bypassing landowners' consent when establishing a new route.

- 149: It should not be possible to establish a route on private property without the landowner's consent. Landowners should have an ultimate right to control their own property.
- 153: It should be possible to establish a route on private property without the landowner's consent whenever there's a need to set up a route.



Topic

- **Establishing new routes.** Which authority should have the right to prevent or allow routes?

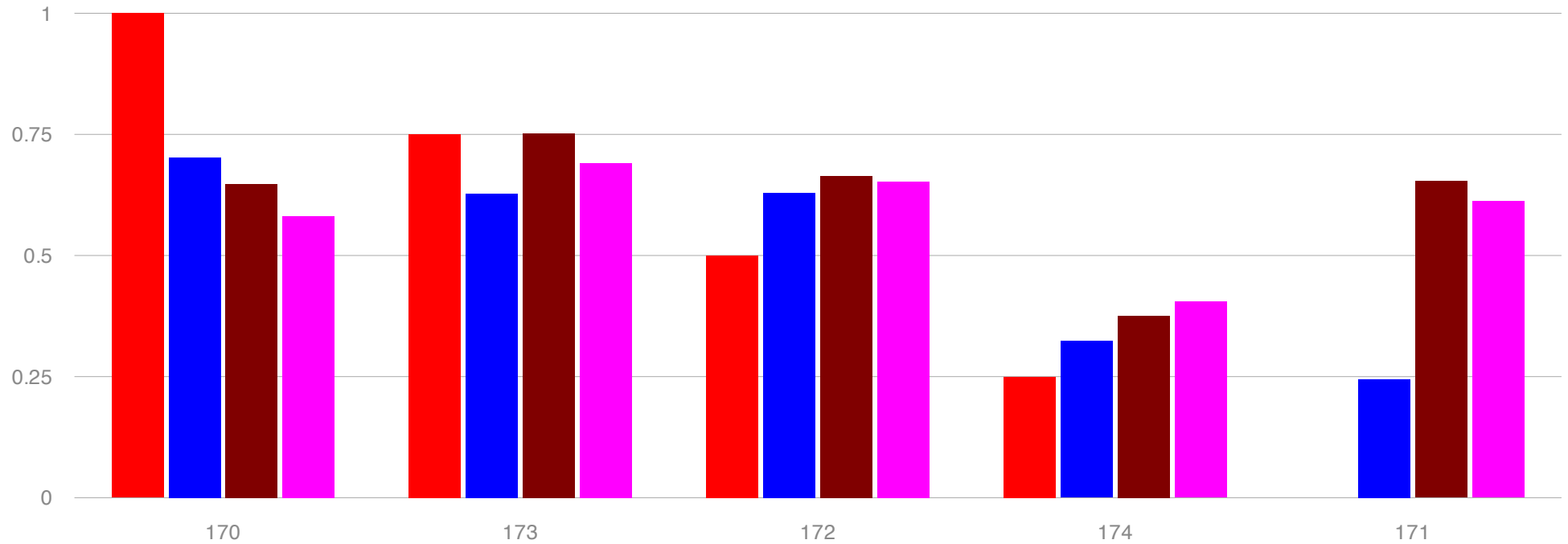
Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 154: The Finnish Forest and Park Service should be granted a veto right (right to prevent a route or trail on their lands) concerning routes or trails in preservation areas that it governs.

- 155: The state or any other public institution should not be obliged to accept routes on their land. They should be granted a veto right regarding planned routes on their land.



Topic

- **Establishing new routes.**How would the maintenance of routes and trails be the best organized?

Metric Legend

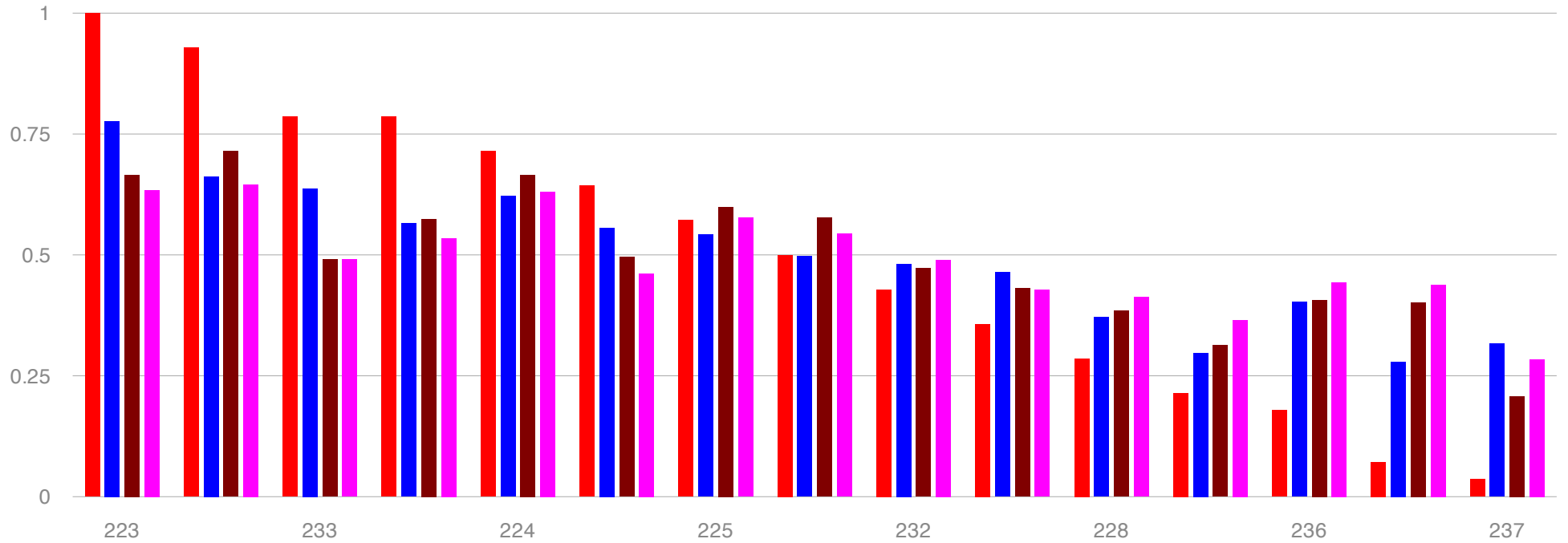
- Copeland
- Borda
- Median
- Mean

Proposals

- 170: Route and trail maintenance should be organised so that a usage fee for riding on routes and trails inside a municipality is collected. The income from the fee should be used to maintain and develop routes and trails.
- 173: Route and trail maintenance should be organised so that at least in southern Finland snowmobile riding clubs and the municipalities co-

operate in order to lower maintenance costs.

- 172: Route and trail maintenance responsibilities should be defined in the route planning phase.
- 174: Route and trail maintenance should be organised so that the planning, maintaining and building of off-road traffic routes are paid for by the snowmobile associations.
- 171: Route and trail maintenance should be organised so that the law defines whose responsibility it is to take care of thicket growing on routesides.



Topic

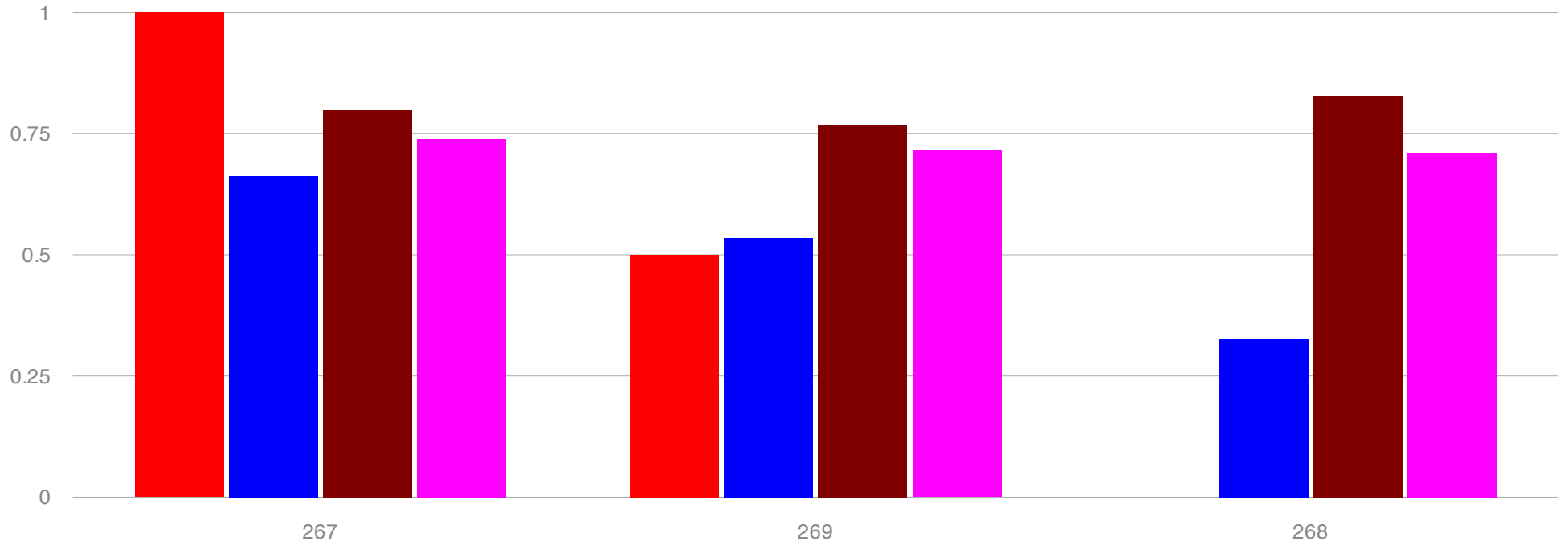
- **Financial compensation for landowners.** What would be the best way to compensate the landowner for the use of his land to off-road traffic?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 223: Multiple factors, such as land quality, agriculture, farming and forestry, should be taken into account in order to fairly calculate the amount of compensation owed to landowners.
 - 229: Financial compensation should be given to private landowners, but the use of existing state-owned routes should remain free of charge.
 - 233: Proper financial compensation for landowners should be paid and routes should be based on voluntary usage agreements.
 - 231: Temporary route usage permits to non-members of the local clubs should be granted; payments would be supervised in the same way as an automobile tax, for instance.
 - 224: The amount of compensation for landowners should be calculated separately for summer and for winter periods.
 - 235: The amount of financial compensation for landowners can be calculated by taking into account the estimated profit from the land (from agriculture or forestry). Compensation for agricultural land should be four times bigger than for forests.
 - 225: Local forestry associations should be consulted when negotiating a compensation amount.
 - 230: The financial compensation for landowners should be organized so that drivers pay for the route maintenance and are given a sticker to prove their payments.
 - 232: The financial compensation for landowners should take into account that snowmobile riders can ride along existing powerlines and other already existing paths, which are suitable for snowmobile riding. The sum plus interest should be given to the landowner at the end of the year.
 - 226: The amount of compensation to landowners should be organized so that a usage fee (including a recurring payment like a rent and compensation for possible damages) is collected from drivers in the beginning of the year and the sum plus interest is given to the landowner at the end of the year.
 - 228: The amount of compensation for landowners should be the same as in the Swedish and Norwegian model: 150 euros per snowmobile.
 - 227: Compensation for landowners should be 1 Euro (\$1,34) per 1 meter (1,09 yards). A snowmobile club would collect the payments from its members and pass them on to landowners. For example, 1 kilometer (0,62 miles) of snowmobile trail would require 1,000 euros (\$1,380) that would be divided by the number of members in a snowmobile club.
 - 236: The amount of financial compensation for the landowner should be paid for all routes and trails and agreed upon by the snowmobile club and the landowner. If no agreement on the amount can be reached, no route can be established.
 - 234: Financial compensation for landowners should be paid and all costs of routes should be paid by the snowmobile clubs.
 - 237: Landowners shouldn't be compensated at all if a route or a trail crosses their property.
-



Topic

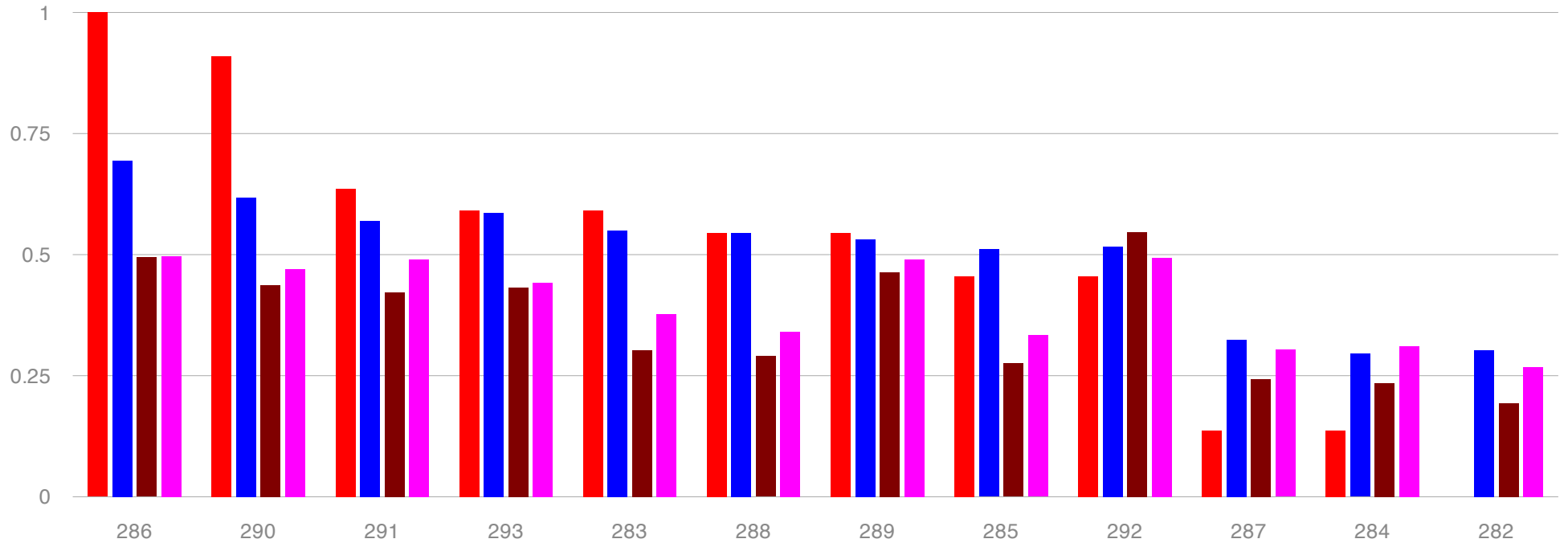
- **Illegal riding.** How to best decrease illegal traffic by allowing more off-route traffic to connect between routes or trails?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 267: Snowmobiles should be allowed to use roads and shoulders for off-route traffic to connect between routes or trails.
- 269: Transfer to routes via private land using existing trails (power lines, open swamp areas etc.) and roads used by other vehicles should be legalized. The offender should pay for any harm he or she causes. If the offense is grave, offenders could be fined.
- 268: Off-route traffic from home to routes should be made legal.



Topic

- **Illegal riding.** How to best decrease illegal traffic by altering monitoring systems?

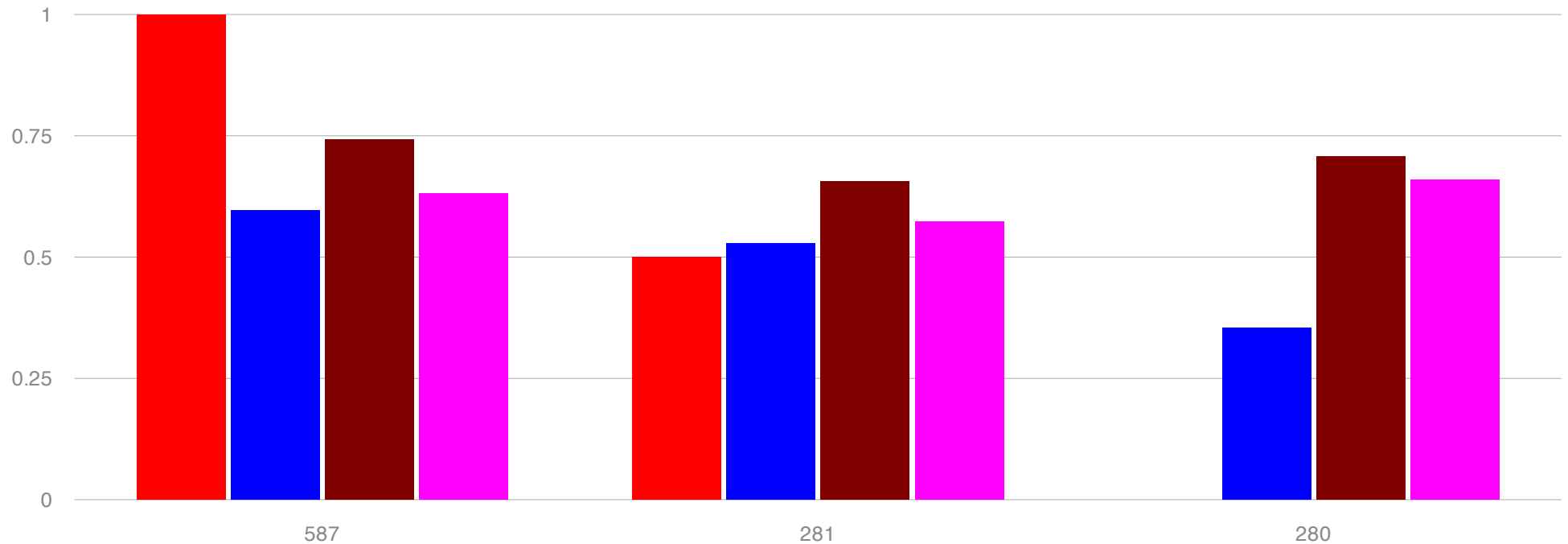
Metric Legend

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Proposals

- 286: License plates should be required for all off-road vehicles in order to track if usage fees have been paid.
- 290: The police should be granted rights to take action against off-road traffic violations.
- 291: Illegal off-road traffic can be decreased by granting monitoring rights to the Border Control.
- 293: A personal driving permit should be required from snowmobile owners for a specific area
- 283: RFID stickers should be used to monitor vehicles on snowmobile trails. Stickers should be sold nearby the trails on easily accessible locations such as gas stations.
- 288: A license plate, which would be a sticker glued to the front cover glass of a snowmobile, should be made mandatory.

- 289: Land-owners should be granted monitoring rights to monitor off-road traffic on their land.
- 285: More police force should be deployed to monitor off-road traffic.
- 292: Forest rangers should be granted monitoring rights to off-road traffic.
- 287: Distance tracking (RFID, GPS) of all off-road vehicles should be used to monitor if usage fees for trails have been paid.
- 284: Snowmobiles should be required to have an individual chain marking to enable tracking illegal riding. The 'chain marking' is a unique trace that a snowmobile's chain leaves on snow. Thus illegal riders could be identified by identifying their traces.
- 282: GPS-tracking of vehicles should be used to monitor traffic and identify illegal riders.



Topic

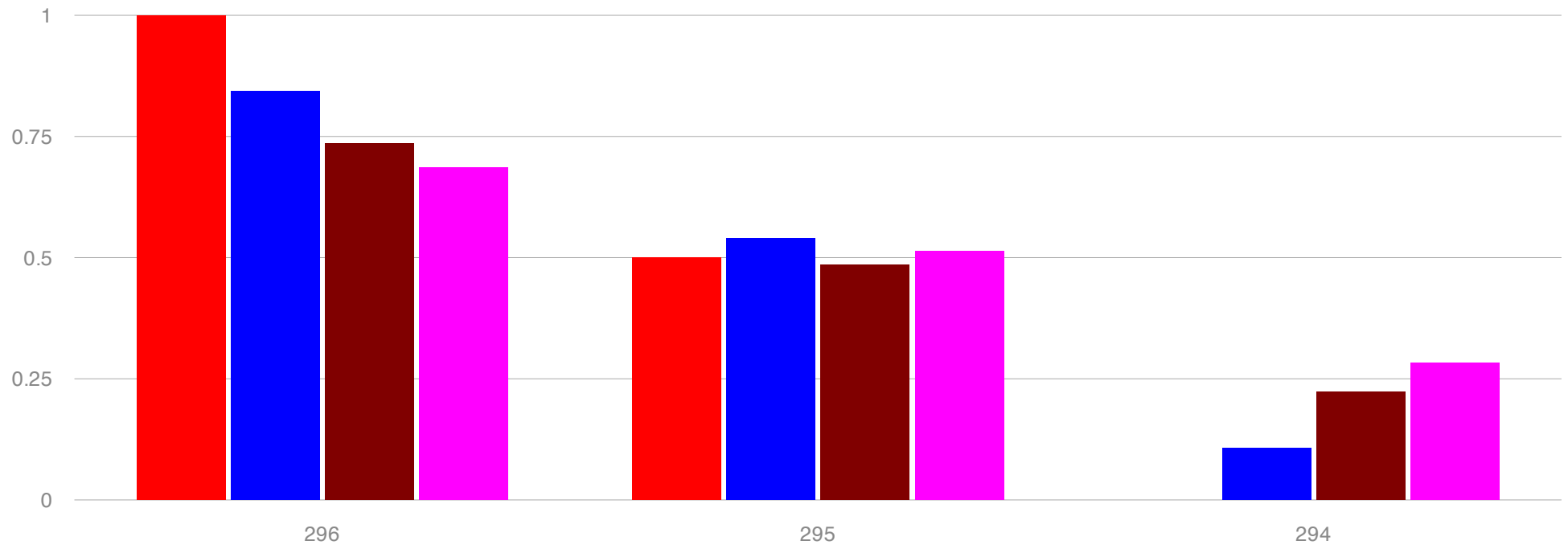
- **Illegal riding.** How to best decrease illegal traffic by modifying traffic arrangements?

Metric Legend

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Proposals

- 587: Going around obstacles on a route should be allowed even if there is no existing route or trail to do so. The current law states that obstacles must be passed via existing routes. This forces riders to make long detours, causing delays and extra kilometers.
- 281: There should be more clear signs on off-road traffic routes to indicate free-riding zones and no-go areas. Signs could be put in place either by landowners, snowmobile club associations or other authorized entities.
- 280: Parking areas for off-road vehicles should be created near route starting points. At the moment, there is a lack of parking areas near route starting points, and therefore off-road traffic route users have to ride illegally along regular roads to reach routes.



Topic

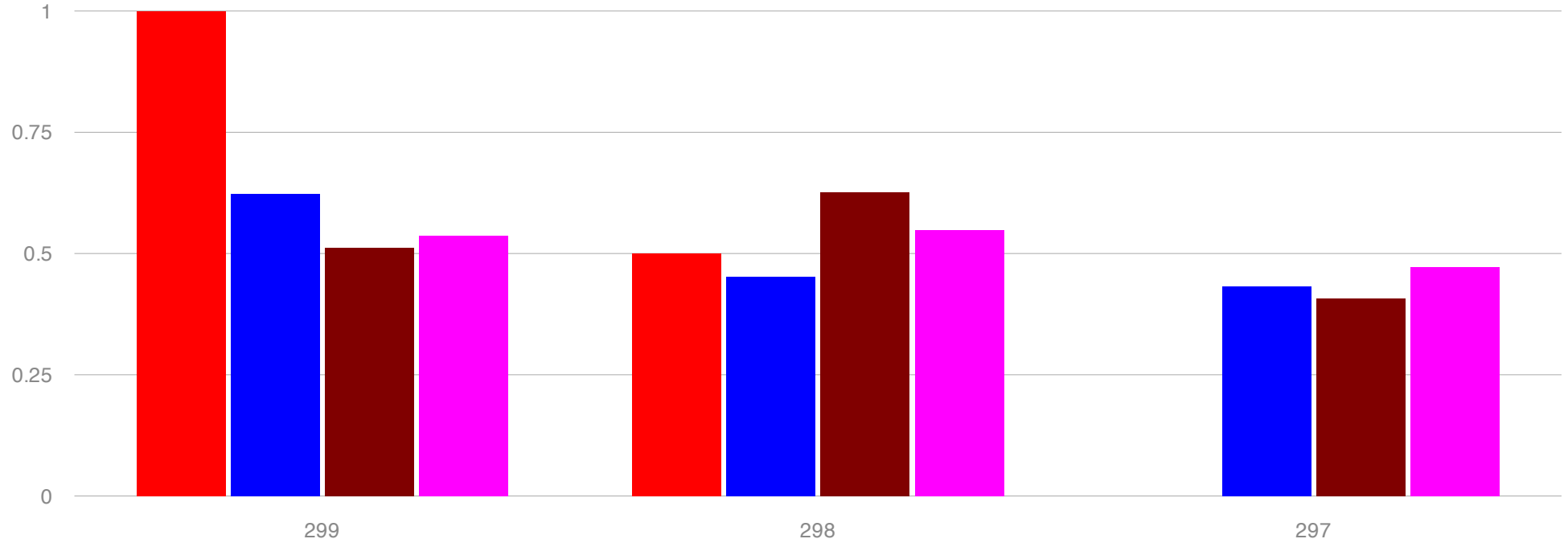
- **Illegal riding.** How to best decrease illegal traffic by punishment?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 296: Any harm caused should be compensated by the offender and if the offense is grave, they should be fined.
- 295: Fines for offenders should be defined. If someone repeatedly breaks the rules, the state could confiscate their vehicle and/or landowners could ban said rider from their land.
- 294: The equipment of law violators and offenders should be confiscated.



Topic

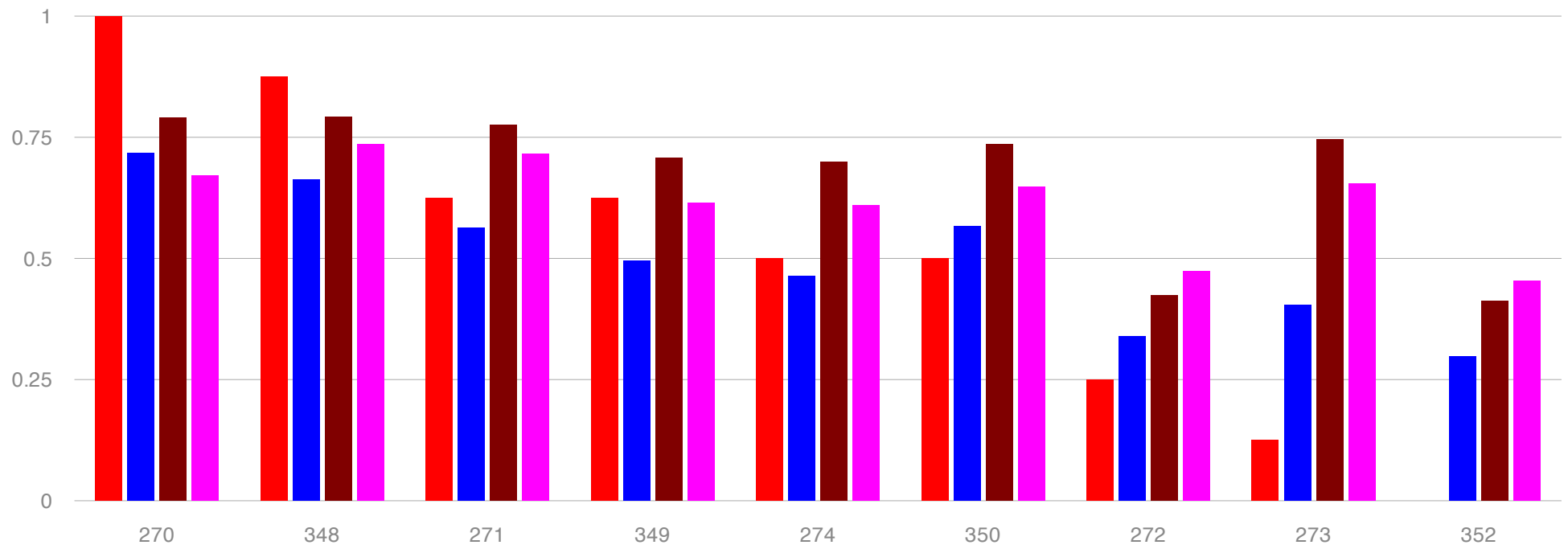
- **Illegal riding.**How to best decrease illegal traffic by altering registration systems?

Metric Legend

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- Median
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Proposals

- 299: Off-road vehicles that are meant for professional use, such as forestry and farming, shouldn't need to be registered. The same applies to off-road vehicles that are used for maintaining cross-country ski trails and such.
- 298: It should be obligatory for all off-road vehicles, also ATV's, to be registered with The Transport Safety Agency (Trafi). Trafi is in charge of vehicle registration and maintains the Vehicle Register in Finland.
- 297: A new registration category for off-road vehicles should be created for the purposes of off-road traffic: all vehicles should be insured and equipped with license plates, no indicator lights would be required, speed limit would be 80 km/h and riding on motorways would not be allowed.



Topic

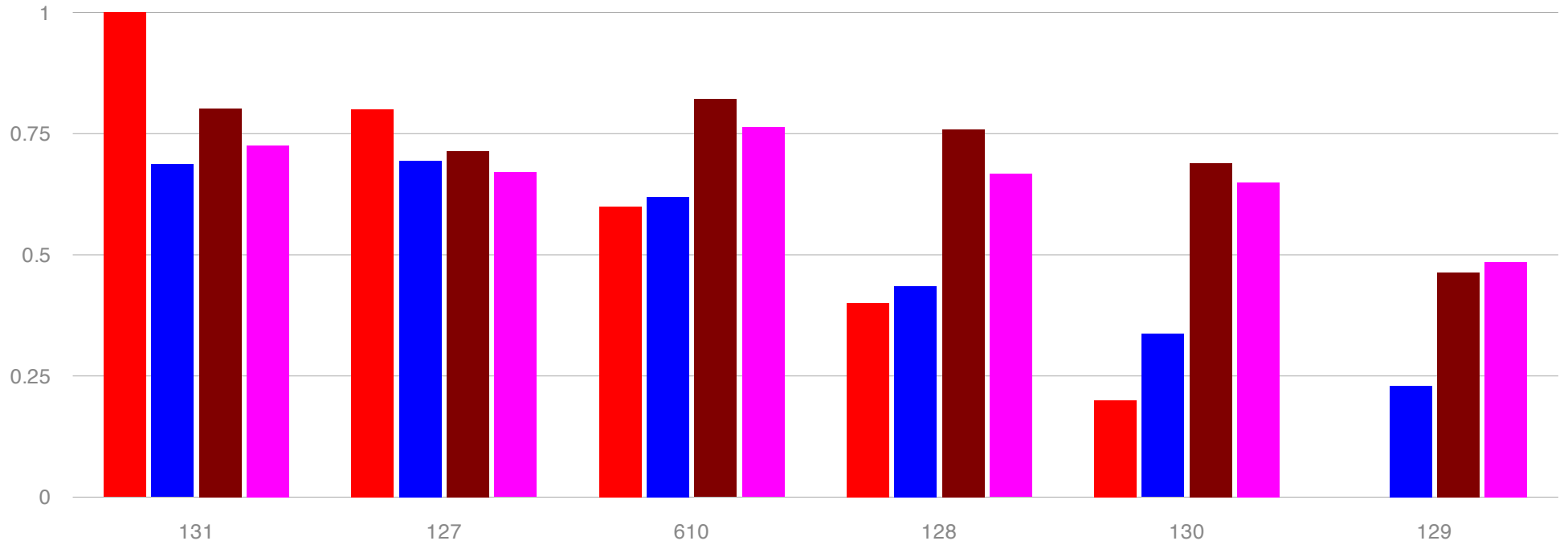
- **Illegal riding.**How to best decrease illegal traffic by increasing the possibilities for off-road traffic?

Metric Legend

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Proposals

- 270: 'Free riding areas' like in Sweden should be created for routeless snowmobile riding for everybody.
 - 348: More routes for off-road traffic should be established, so that there's less need for illegal riding.
 - 271: Residents in sparsely populated areas of Lapland and Northern Finland should be allowed to ride snowmobiles off routes because in these areas, snowmobiles are used as a means of transportation. In order to use snowmobiles as a means for daily commute, it is claimed that residents in Northern parts of Finland can't stay on routes or trails because there's not enough of these, and also the need for mobility on snowmobiles is constantly changing.
 - 349: Landowners should be allowed to ride unregistered vehicles on their own land.
 - 274: Free riding (meaning riding anywhere off routes and trails) in Lapland should be allowed except in areas restricted due to farming needs, such as reindeer breeding period.
 - 350: Landowners should have more flexibility to decide about off-road traffic on their land. They should be able to create free-riding zones and no-go areas on their lands. Landowners should then be given tools to easily designate areas on their land to which they grant snowmobiles access. Clear pointers to indicate free-riding zones and no-go areas should be placed on digital maps. Landowners would only need to indicate to the local authority in which areas they prohibit snowmobile access and that information would be transferred to digital maps. Since there would be more areas for legal traffic, illegal traffic would decrease.
 - 272: Free riding (meaning riding anywhere beyond routes and trails) in Lapland should be allowed under the condition that the driver is a permanent resident of one of the counties in Lapland.
 - 273: Tourists in Lapland should be allowed to buy temporary permits to use 'free riding zones', with which one can ride anywhere and doesn't need to follow routes or trails. These free riding zones don't exist yet, but should be established.
 - 352: Snowmobile trails should be turned into routes, as it would permit carrying a hunting rifle on a snowmobile.
-



Topic

- **Location of routes.** How could the snowmobile routes be situated the best taking buildings and structures into account?

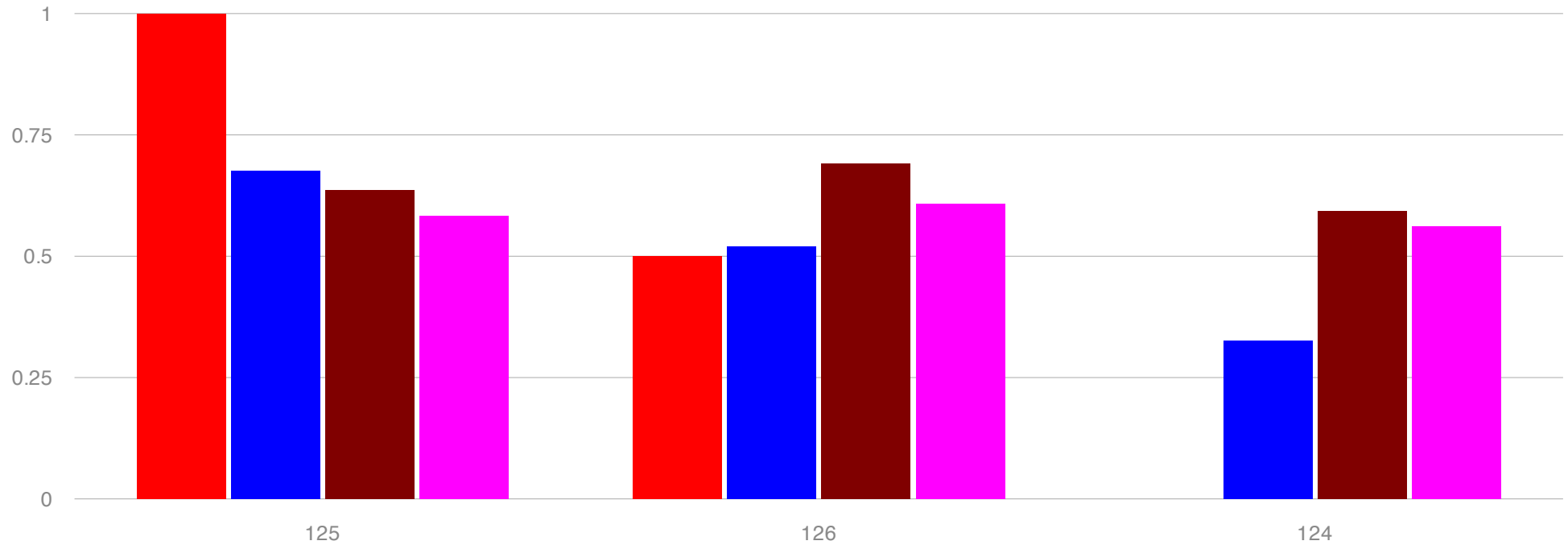
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Proposals

- 131: Middle-sized powerlines and large powerlines and the sides of fields for agricultural use should be free to use for off-road traffic.
- 127: New routes should be established along power grid lines. Trees are typically cut in these areas so they are good places to ride.
- 610: The granting of permits for riding along powerlines should be simplified.
- 128: Given that existing powerlines and the sides of fields for agricultural use would be used by off-road traffic, landowners should mark Christmas tree fields so that they do not get destroyed by traffic.
- 130: Short ring routes should be established around hydro-electric power plants. This would help create a nationwide body route network that utilises existing power lines and reservoirs of large rivers.

- 129: The location of routes should be determined based on where noise is already prevalent, such as industrial areas and populated areas.



Topic

- **Location of routes.** How should the location of routes be determined?

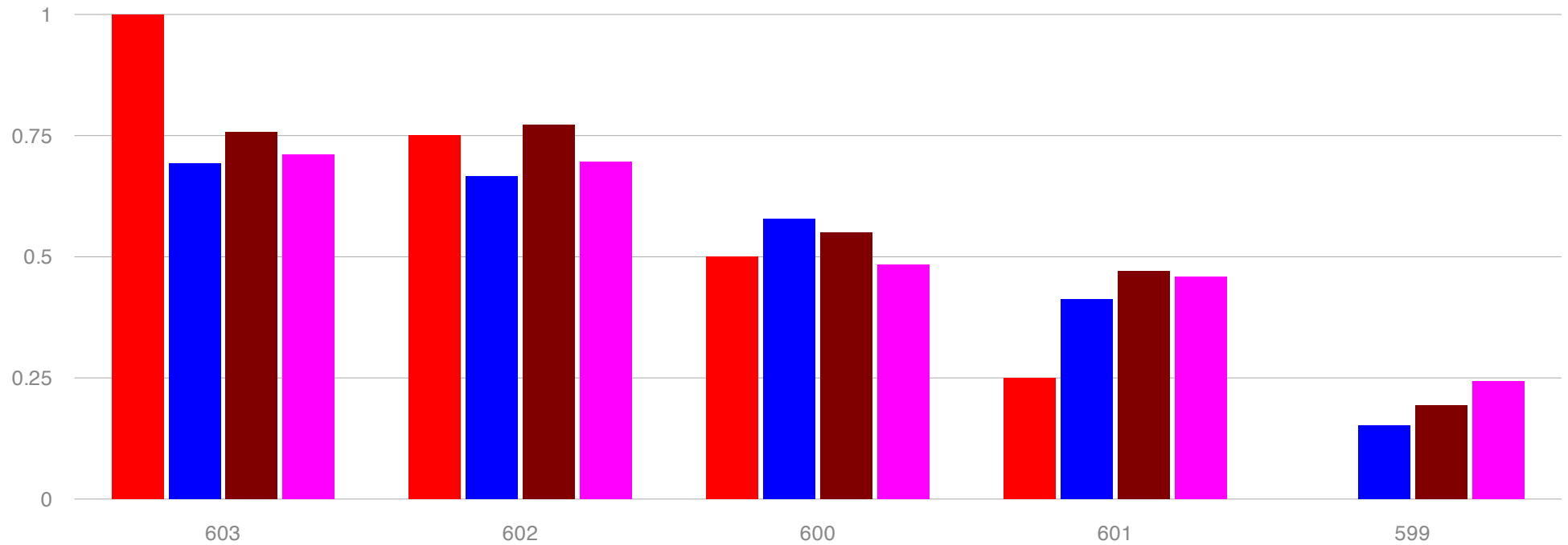
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Proposals

- 125: Uusia reittejä koskevan sääntelyn tulisi olla erilaisia reiteille, jotka kulkevat yksityisillä mailla ja reiteille, jotka kulkevat valtion omistamilla mailla.
- 126: Valtion omistamilla mailla kriteerien tulisi olla erilaiset reiteille, jotka kulkevat suojelluilla luontoalueilla ja reiteille, jotka kulkevat tavallisilla luontoalueilla.

- 124: Uusia reittejä koskevan sääntelyn tulisi olla erilaista Pohjois-Suomessa sijaitseville reiteille ja Etelä-Suomessa sijaitseville reiteille.



Topic

- **Location of routes.** How to best match the purpose and regulation of off-road traffic?

Metric Legend

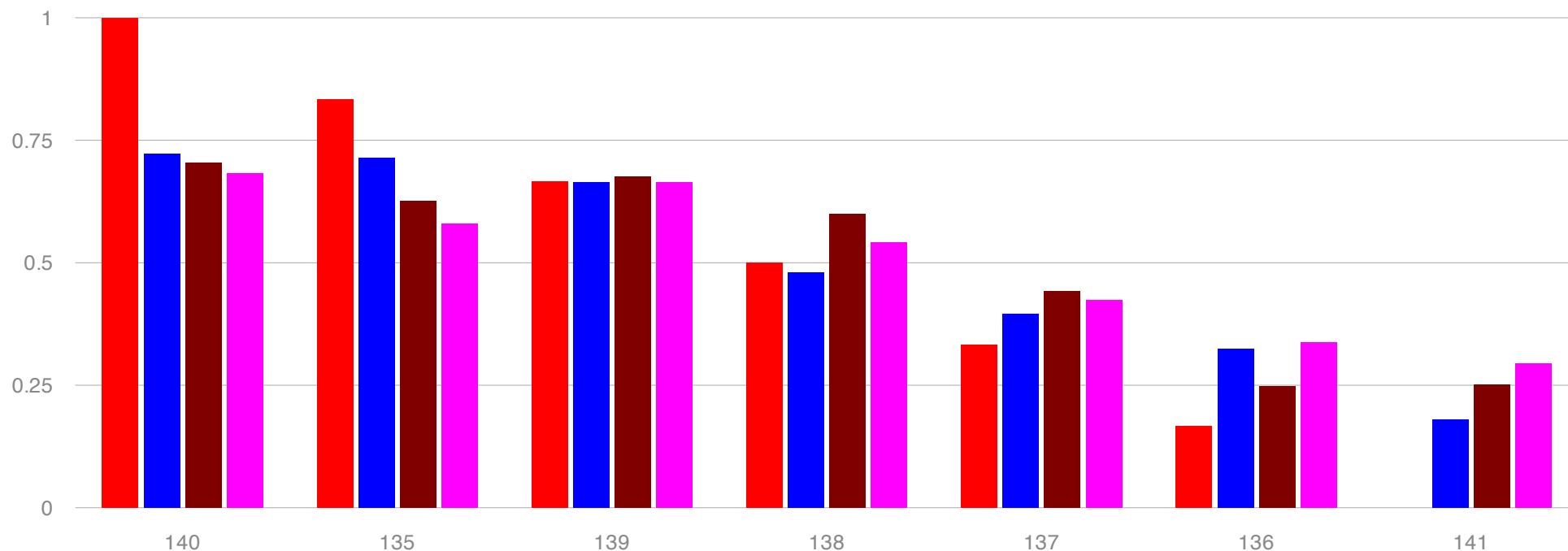
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Proposals

- 603: The Swedish model should be followed: there should be more freedom to ride snowmobiles off established routes and trails.
- 602: Professional use of off-road vehicles (snowmobiles and ATV's) like reindeer husbandry and professional fishery should remain permitted off routes and trails.
- 600: Snowmobile riding for leisure should be permitted only on routes and it should be regulated under the general Road Traffic Act (267/1981).

Snowmobile riding for other purposes than leisure, such as for professional use like reindeer husbandry and professional fishery, should remain permitted off routes.

- 601: Individuals with special needs should be taken into consideration when setting routes.
- 599: Off-road traffic should be allowed only for professional use, not for leisure.



Topic

- **Location of routes.** What type of restrictions route locations should have?

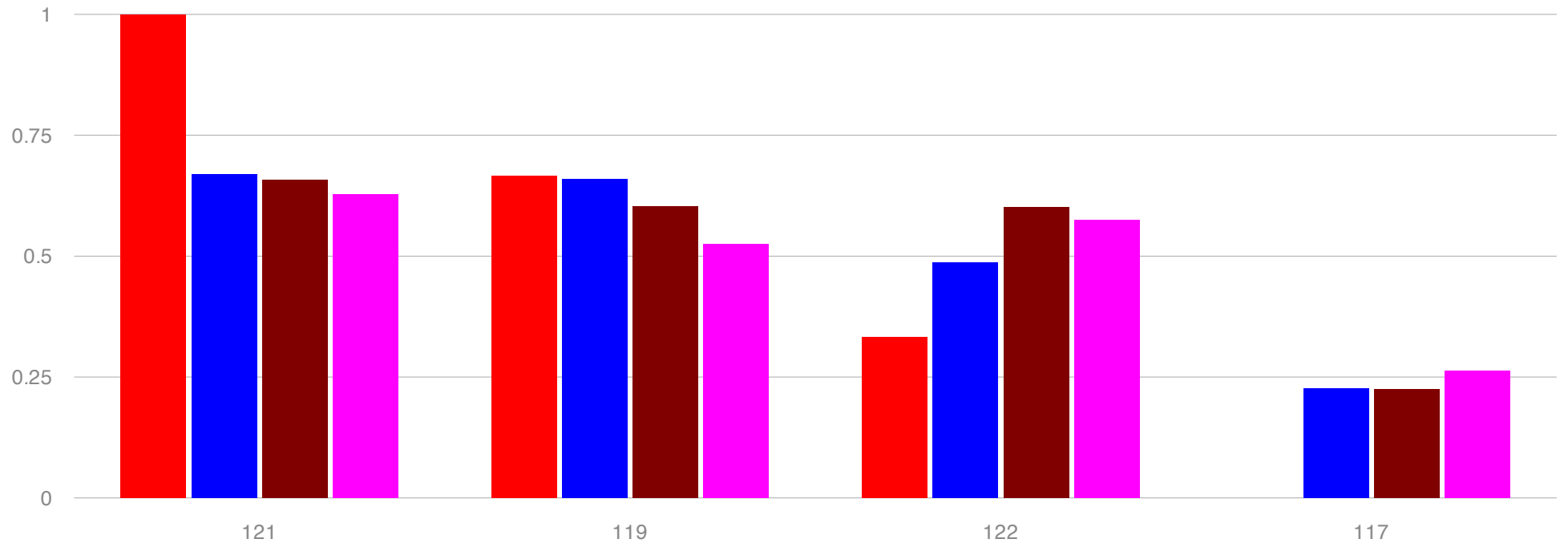
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Proposals

- 140: When deciding the location of routes, landowners can indicate which areas they don't want to be used.

- 135: Routes should respect a certain minimum distance to gardens, cowsheds and houses.
- 139: When a route is planned, landowners should be encouraged to indicate which areas they don't want to be used on their property.
- 138: "No-go areas" should be established for farming and agriculture purposes. A no-go-area refers to a zone in which off-road traffic is absolutely banned.
- 137: The location of routes has to follow the urban zone planning and should not interfere with zoning plans.
- 136: Untouched nature and wilderness should not be used for off-road traffic.
- 141: If endangered species and other wildlife are discovered when a route or a trail is planned, then a private nature reserve should be created.



Topic

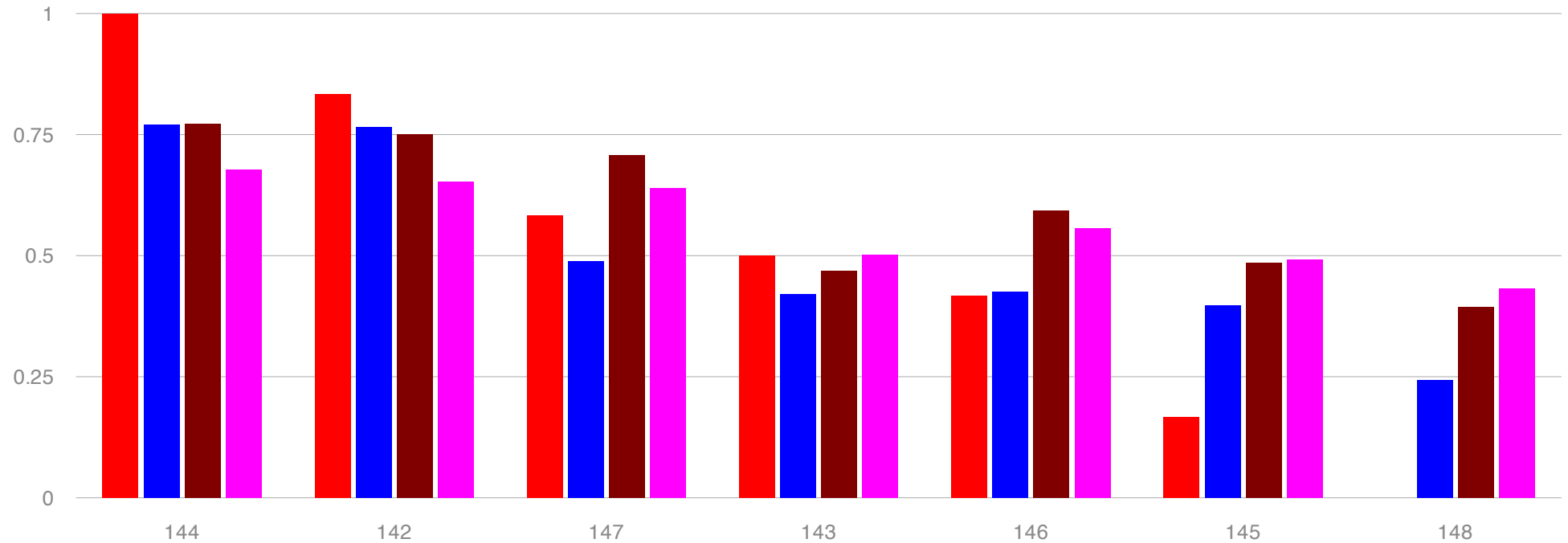
- **Location of routes.** What would be the best way to situate snowmobile routes?

Metric Legend

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- Borda
- Median
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Proposals

- 121: There should be more routes in the Eastern and Northern parts of Finland.
- 119: Undeveloped land beyond residential areas should be made available as free-riding zones.
- 122: Co-operation with Russia should be sought to determine locations of routes at the border.
- 117: There should be no routes on private land but instead all routes should be located on state-owned land.



Topic

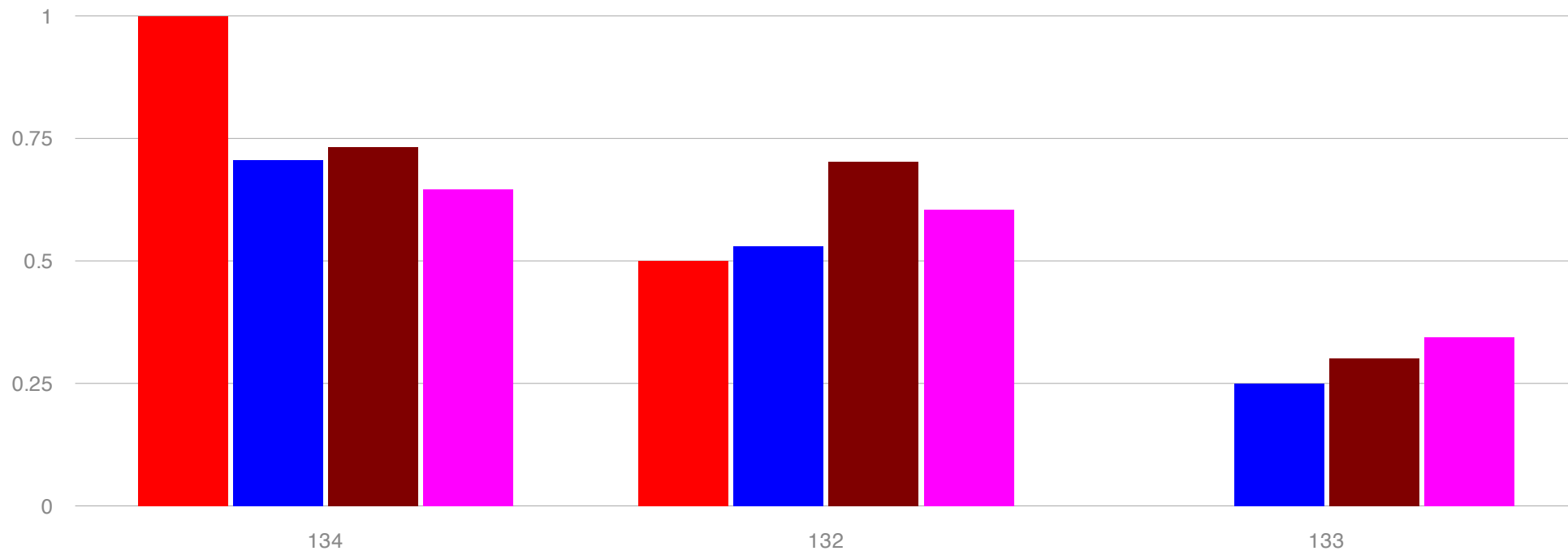
- **Location of routes..** What would be the best way to arrange snowmobile riding in Lapland?

Metric Legend

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- Borda
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Proposals

- 144: The Swedish model for off-road traffic should be applied at least to Lapland.
- 142: Lapland, the northern part of Finland, should have more areas reserved for free, unrestricted driving than other parts in Finland because there's so much undeveloped land.
- 147: When deciding on off-road traffic regulations for Lapland in particular, a larger number of affected parties should be consulted. These parties include officials of northern municipalities, especially Kittilä, the Finnish Forest and Park Service, and snowmobile clubs.
- 143: Riding off-road vehicles and ATV's to fishing lakes in the northern, sparsely populated areas in Finland should be allowed. Otherwise fishing is impossible.
- 146: Residents in Lapland should have the right to ride freely inside their county. This means they should be allowed to ride off routes and trails.
- 145: Snowmobile riding in large national parks in Lapland should be allowed.
- 148: The off-road traffic law should not give some users (e.g., reindeer owners) special rights because these rights would water down the whole law.



Topic

- **Location of routes.**How could the snowmobile routes be situated the best taking traffic patterns into account?

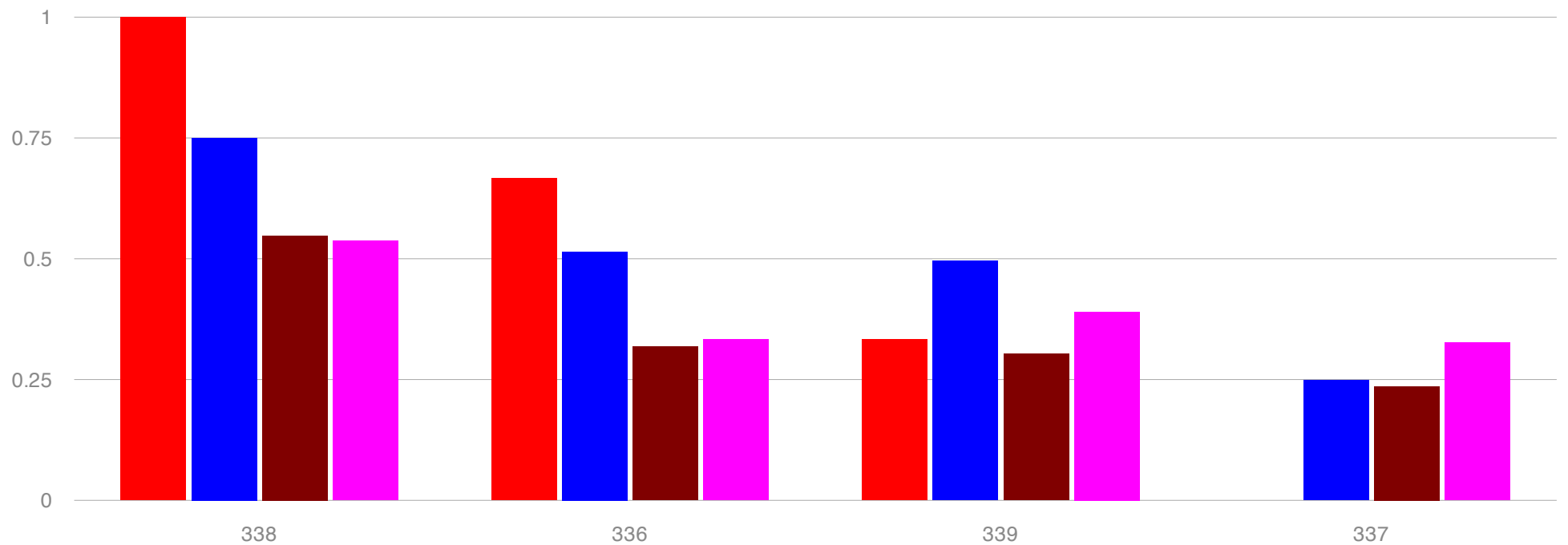
Metric Legend

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Proposals

- 134: Small roads meant for tractors in the summer should be opened for snowmobiles in the winter.
- 132: New routes should be established based on existing routes even if they are at the moment classified as illegal.
- 133: The location of routes should be determined based on GPS-acquired data.



Topic

- **Off-road traffic law and other laws.** How could off-road traffic be the best regulated under other existing laws?

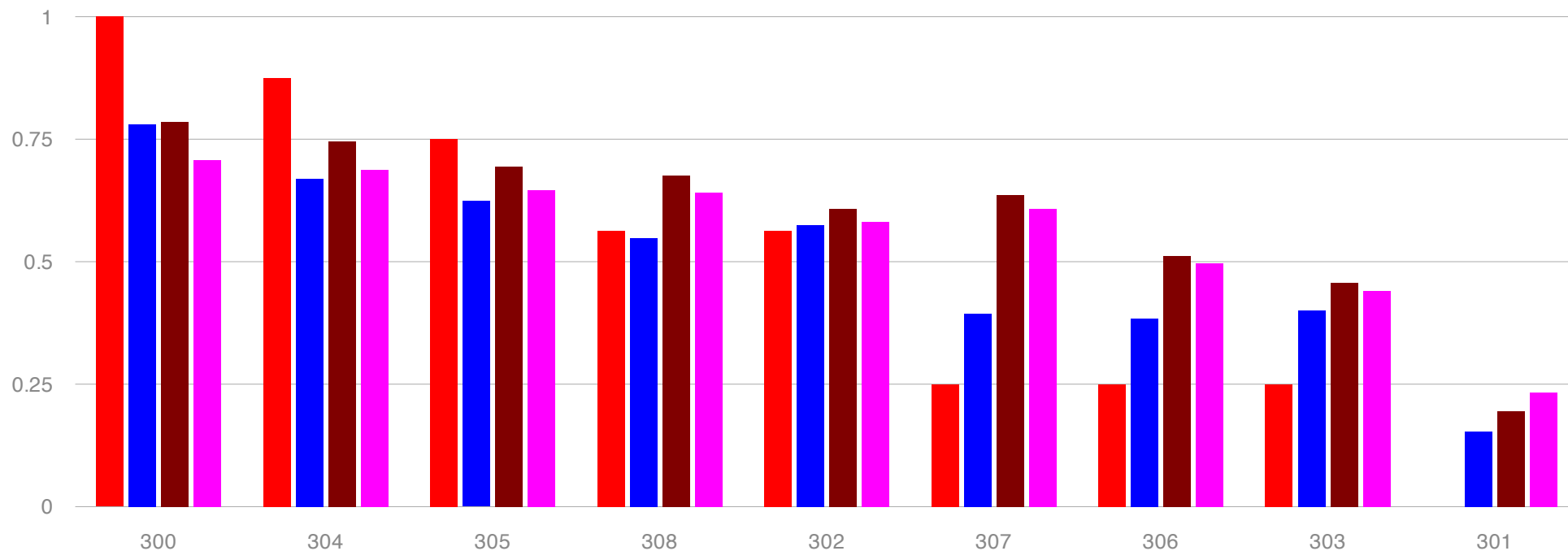
Metric Legend

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Proposals

- 338: Vehicles used in forestry or other business-related activities should be left outside of the off-road traffic legislation.
- 336: Off-road traffic should be regulated under the general Road Traffic Act (267/1981) instead of a specific law. Some issues could be regulated under some other appropriate laws, such as the Vehicles Act (1090/2002)
- 339: Snowmobile riding for leisure should be permitted only on routes and it should be regulated under the general Road Traffic Act (267/1981). Snowmobile riding for other purposes than leisure, such as for professional use like reindeer husbandry and professional fishery, should remain permitted also off the routes.
- 337: Permits for off-road traffic competitions and practicing for competitions should be transferred to the Nature Conservation Act (1096/1996). Currently there is too much room for interpretation and too much decision power at the level of individual municipalities.



Topic

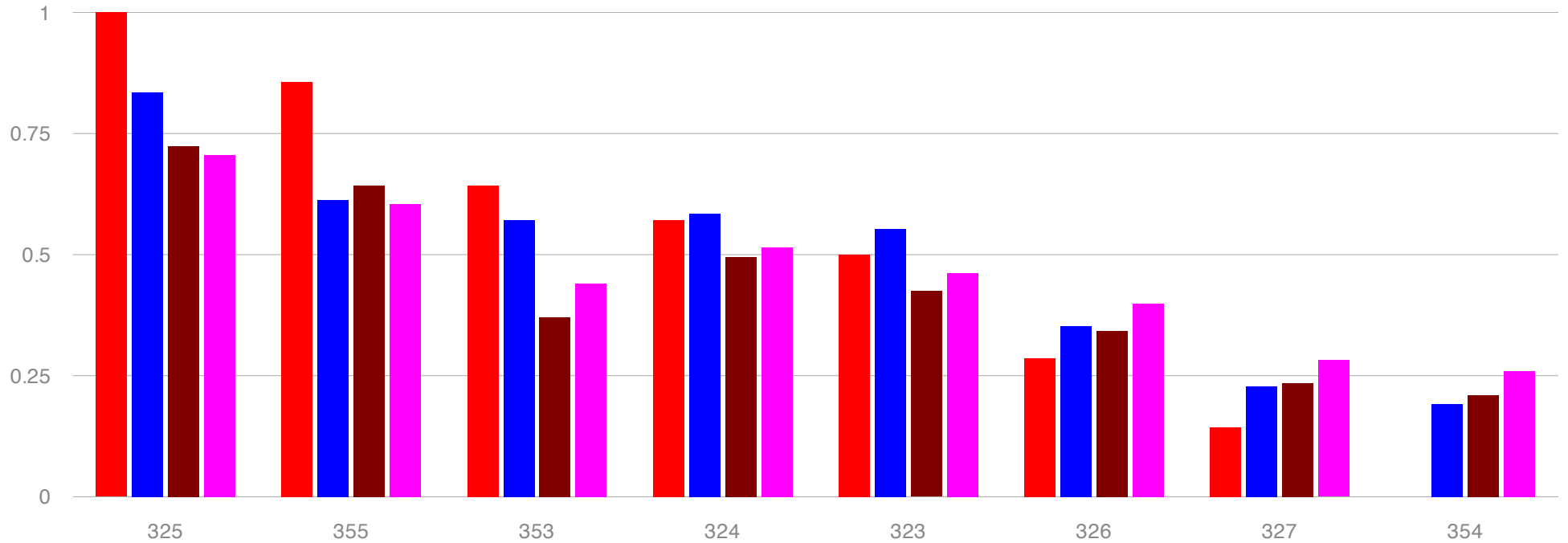
- **Preparatory process.** How could the preparatory process of the off-road traffic law reform be the best improved?

Metric Legend

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- Borda
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Proposals

- 300: The law reform should be inspired by the Swedish law that is generally considered more permissive than the current Finnish law.
 - 304: All the minutes and other documents of the preparatory working group should be published online.
 - 305: The preparatory working group should organize local hearings on the law reform.
 - 308: When crowdsourcing a law reform using an online platform, the participants should represent all the relevant interests. Crowdsourcing should not be a mere marketing trick but should have a genuine influence on the law.
 - 302: A preparatory working group consisting of members representing a broad range of stakeholders for the actual law-writing process should be set up for the preparation of the off-road traffic law.
 - 307: When the law reform is done, instruction booklets about the law-reform process and its implications should be written to increase compliance with the new law.
 - 306: The preparatory working group should have resources to order investigations on, e.g., environmental issues.
 - 303: SYKE experts (SYKE= Finnish Environmental Center) should participate in the preparatory working group to provide information on environmental impacts.
 - 301: The law reform should be inspired by the Norwegian law that is generally considered more restrictive than the current Finnish law.
-



Topic

- **Regulation of harm to nature, environment and neighbors.** How could the natural environment and wildlife be the best taken into account in the off-road traffic law?

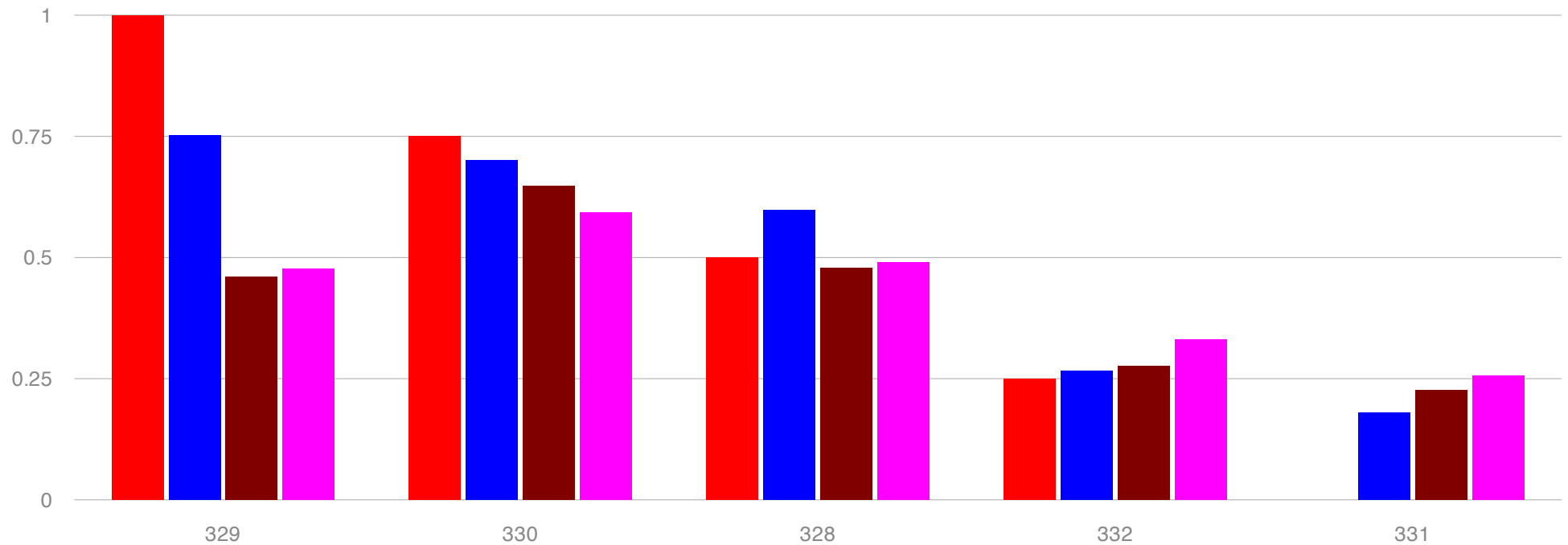
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Proposals

- 325: If established snowmobile routes are opened for ATV's for summer use, the routes for summer use should be evaluated on a case-by-case basis. This means that each route should be evaluated independently whether it can be used in summer time as well. The impacts of the summer use of the route have to be evaluated separately.
- 355: There should be more education of the younger generation about environmental ethics, so that they learn to respect nature more.
- 353: According to the "Swedish model," riding of snowmobiles with at least 50 cm wide and/or 390 cm long trail chain/rollers is allowed. Minimum length for a narrow roller/trail chain should be 4 meters.

- 324: The law should have sufficient criteria for preventing, mitigating and compensating harm.
- 323: A better or a more specific criterion than “considerable harm” should be defined in the law to refer to the harm off-road traffic causes to the natural environment.
- 326: The Ministry of Environment should conduct comparative research on other countries’ restrictions in order to establish relevant limits for gasoline emissions in Finland.
- 327: The law should include restrictions for off-road traffic emission pollution.
- 354: Illegal hunting by using off-road vehicles should be decreased by requiring the installation of a GPS tracking system in off-road vehicles.



Topic

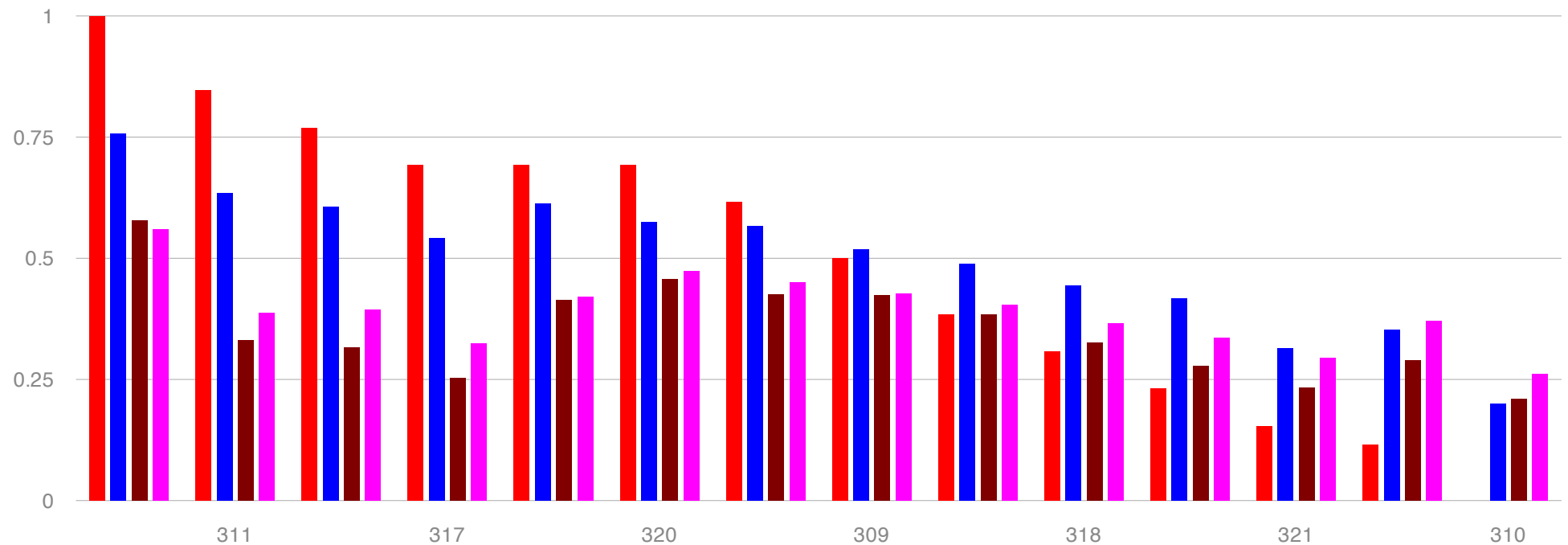
- **Regulation of harm to nature, environment and neighbors.** How could the nature be the best protected by regulating traffic locations?

Metric Legend

- Copeland
- Borda
- Median
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Proposals

- 329: No-go areas (no-go areas refer to areas in which off-road traffic is banned) should be established and their size should be based on the distance to endangered species, eagle nests, and such and listed in the guidelines of the authorities.
- 330: Routes should go around small water areas and precious environmental and wildlife areas.
- 328: No-go areas (no-go areas refer to areas in which off-road traffic is banned) should be established to protect nature.
- 332: Community organizations and nature conservation organizations should have the right to apply for restrictions to off-road traffic in some areas.
- 331: Vast forest areas should be kept free of human activities and reserved for wildlife only.



Topic

- **Regulation of harm to nature, environment and neighbors** How could the noise caused by off-road traffic be the best managed?

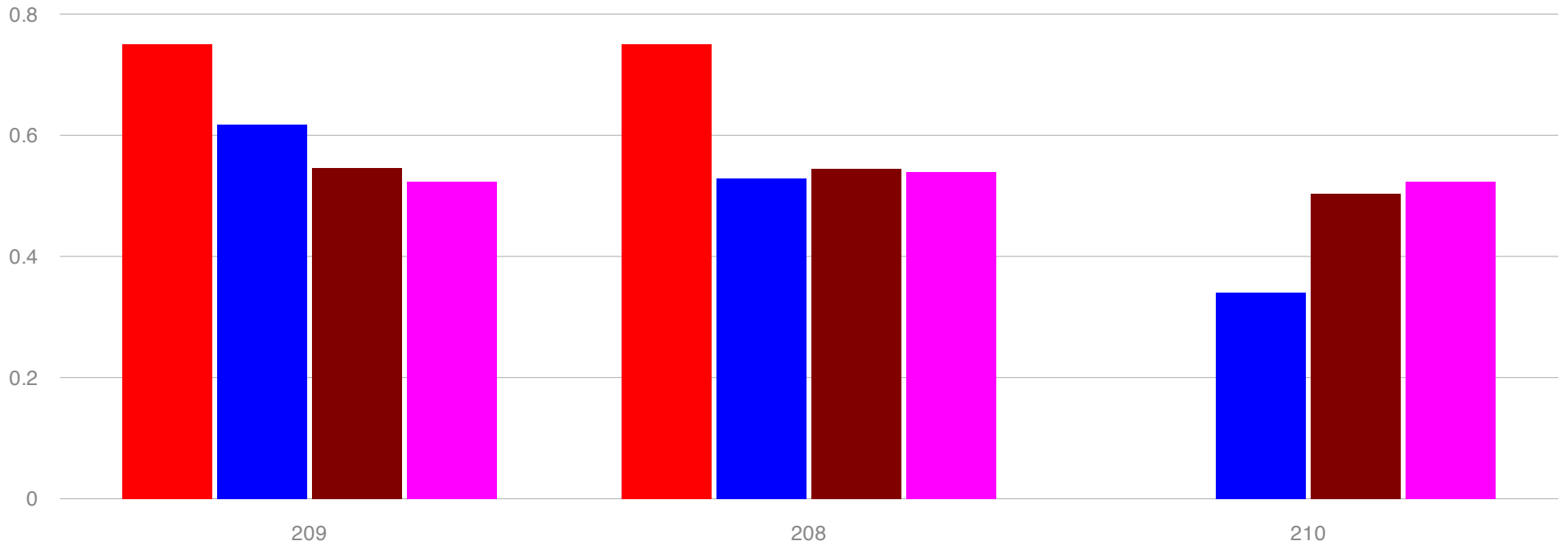
Metric Legend

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Proposals

- 316: In order to reduce noise, off-road traffic routes should be far enough from residential areas.
 - 311: Routes should be established with a minimum distance to residential areas. The more traffic there is on a route, the greater the distance should be between the route and residential areas. The minimum distance should be 1 km.
 - 312: No off-road routes should be allowed closer than 1 kilometer from quiet areas or recreation areas marked in urban planning zones.
 - 317: In order to reduce noise, there should be payment waivers for light snowmobiles with small motors that travel at a lower speed.
 - 314: The off-road traffic law should include restrictions for off-road traffic noise pollution limits.
 - 320: When making noise level evaluations for route plans, noise levels of other ongoing projects, such as building projects and the joint effects of the routes and projects on quiet areas, other recreational activities and animals should be taken into account.
 - 319: Proper noise level evaluations and predictions should be included in the route plans and applications.
 - 309: Vehicles should have a speed limit of 30 km/h near residential areas.
 - 315: There shouldn't be any regulation in the off-road traffic law regarding noise pollution levels.
 - 318: The term in the current law "considerable harm" should be replaced with a stricter term, for instance one like "greater than little harm".
 - 313: Noise limits for off-road traffic should be more restrictive than for regular traffic.
 - 321: Snowmobiles and ATV's should be taxed according to their noise level and gas emissions.
 - 322: Routes should be narrower than 6 meters. This would keep noise levels down as narrower routes don't allow fast and noisy riding.
 - 310: Snowmobiles should be powered by electricity. This would decrease the noise level.
-



Topic

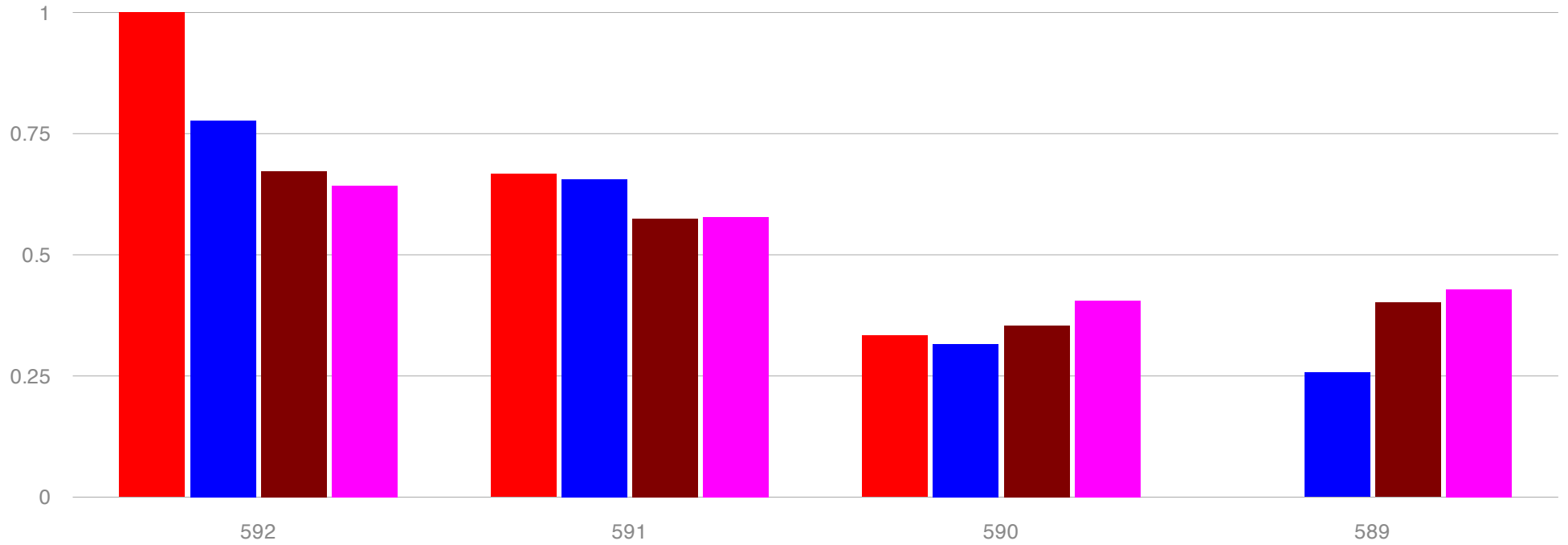
- **Route impact evaluations.** If the law regulated about the impact evaluation, how could the impact evaluation be arranged so that the financial aspect could be measured the best?

Metric Legend

- Copeland
- Borda
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Proposals

- 209: Impact evaluations should include a cost-benefit analysis for all parties involved (i.e., who benefits from the route and by how much, who is harmed and loses out because of it, and by how much).
- 208: Impact evaluations should include all the estimated financial pros and cons.
- 210: Impact evaluations should include an estimate of of how many state funds will be used for the route and how much revenue the route will bring in return.



Topic

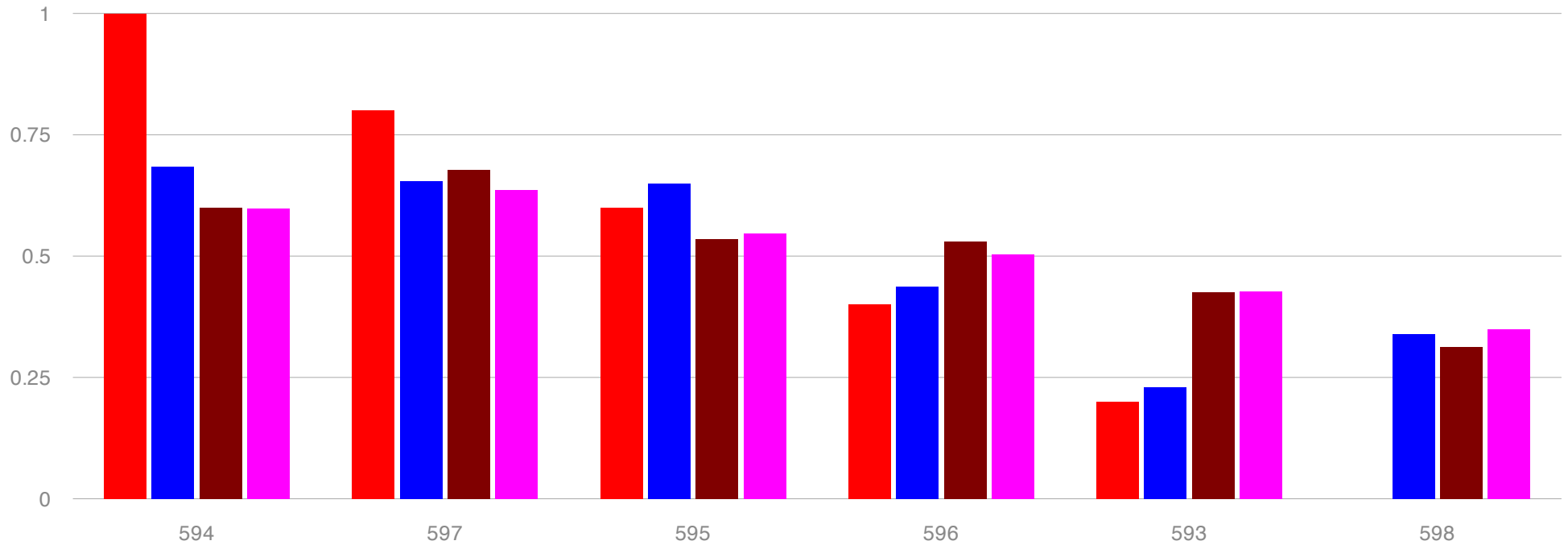
- **Route impact evaluations.** If the law regulated about the impact evaluation, how could the impact evaluation be arranged so that the impact on natural environment would be the best measured?

Metric Legend

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- Borda
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- Mean

Proposals

- 592: Impact evaluations should include proposals on how the routes could bypass sensitive wildlife areas
- 591: Impact evaluations should include proposals on how to mitigate the harm to nature.
- 590: Impact evaluations should include an estimate of the impact of the route on water pollution and noise levels
- 589: Impact evaluations should include an estimate of the impact of the route on endangered species.



Topic

- **Route impact evaluations.** If the law regulated about the impact evaluation, how could the impact evaluation be arranged so that the overall impact of off-road traffic could be taken into account?

Metric Legend

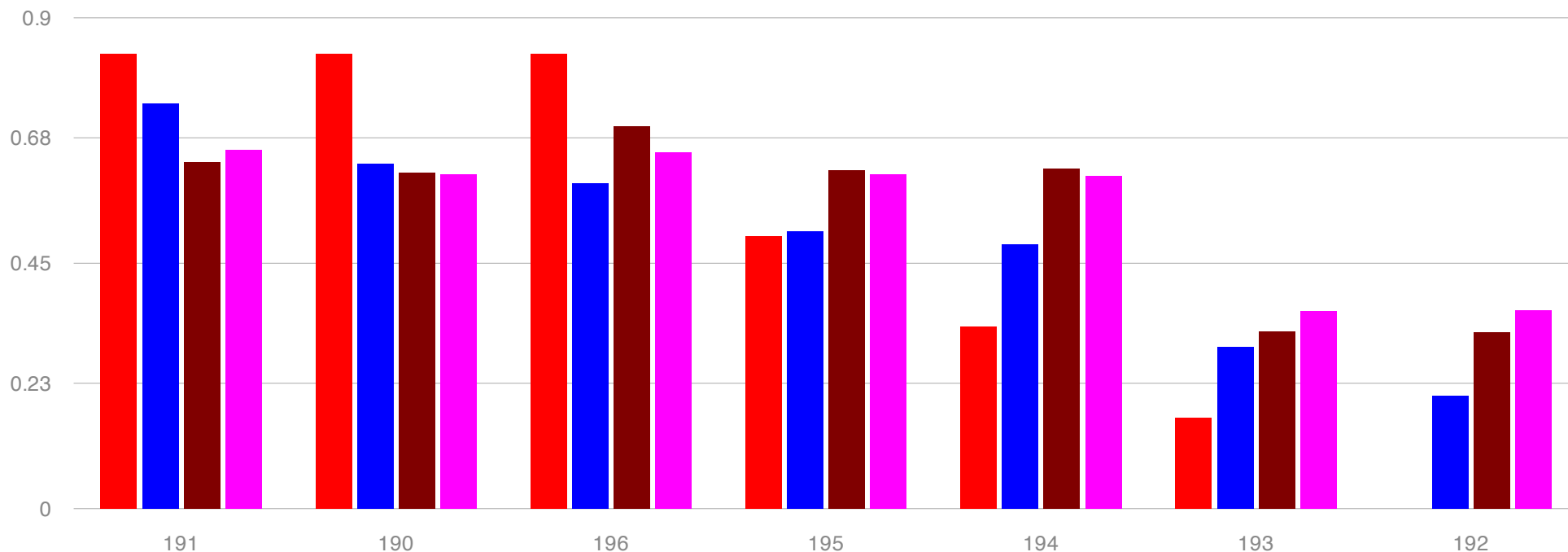
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Proposals

- 594: Impact evaluations should cover the full life-span of a route, i.e. the construction period, the period during which the route is in use, and the period after the route is no longer in use.
- 597: Impact evaluations should include alternative locations for the planned route.
- 595: Impact evaluations should include an explanation and justification for the claimed need for a route.
- 596: Impact evaluations should include an explanation of the consequences if the route won't be established.
- 593: Impact evaluations should take into account the joint effects of any other ongoing or planned projects in the area that add to the area's

noise and traffic levels. For instance they should take into account any planned development sites and other projects carried out simultaneously that impact the area's levels of noise and traffic.

- 598: Existing GPS-tracking data of snowmobile traffic should be used when drafting the impact evaluation. The data could be used to verify the amount of traffic and to estimate the impact.



Topic

- **Route-setting procedures.** How to best spread information about route plans and procedures?

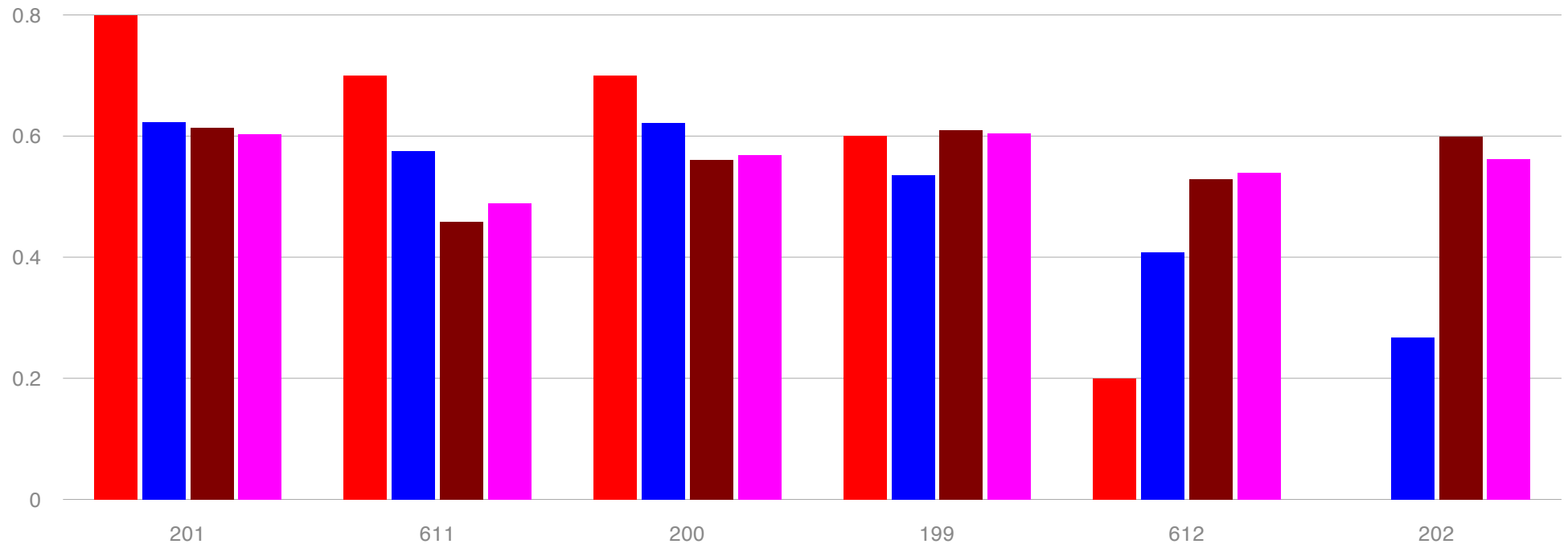
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Proposals

- 191: Criteria for route permits for new routes and related impact evaluations should be made public and published online.

- 190: All hearings and decisions about route plans and route-setting procedures should be announced online and in the local newspaper.
- 196: When planning, renewing or building an off-road traffic route on private property, all affected parties should be contacted by personal mail or other means.
- 195: The route plan should be made accessible to the public at least 30 days before decisions are made. This regulation is currently part of the Outdoor Recreation Act in Finland. (606/1973).
- 194: Any plans for new routes should be communicated locally early and widely, even before a landowner meeting is scheduled. This could be done through newspaper announcements, so that locals have a chance to familiarise themselves with the plans and the anticipated consequences of the planned route.
- 193: Neighbors should be invited to route planning events, even if the route or trail is established based on a two-way agreement between the landowner and a snowmobilst only.
- 192: Environmental experts (e.g. environmental associations) should be involved in route planning activities and events.



Topic

- **Route-setting procedures.** What kind of requirements route plans should have?

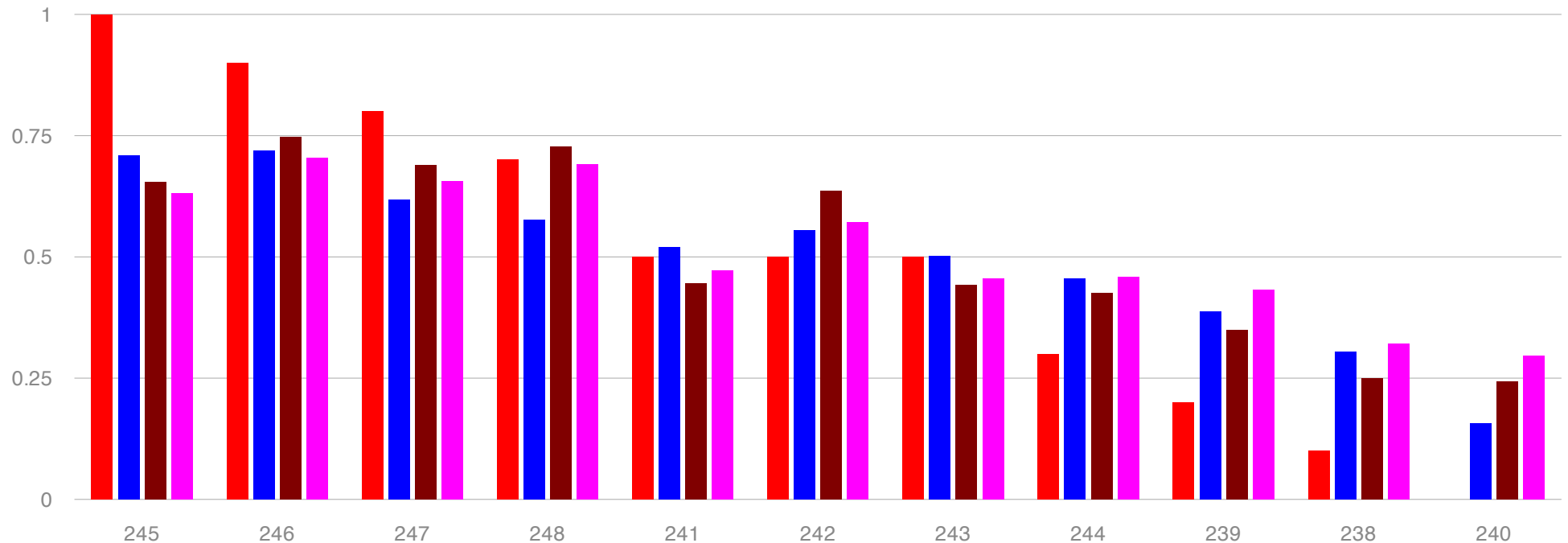
Metric Legend

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Proposals

- 201: A route plan should include a description of the anticipated route usage.
- 611: A proper impact evaluation should be conducted for each route.
- 200: Applications for routes meant for common use should require proper route plans indicating the location, anticipated traffic amounts, and types of vehicles expected to use the route.
- 199: When applying for a new route, the applicant should present an extensive route plan.
- 612: During the route-planning phase, a proper and thorough evaluation should be conducted that assesses the impacts of the route for the natural environment.
- 202: Route plans should also be made for ice-covered grounds if those are part of a route.



Topic

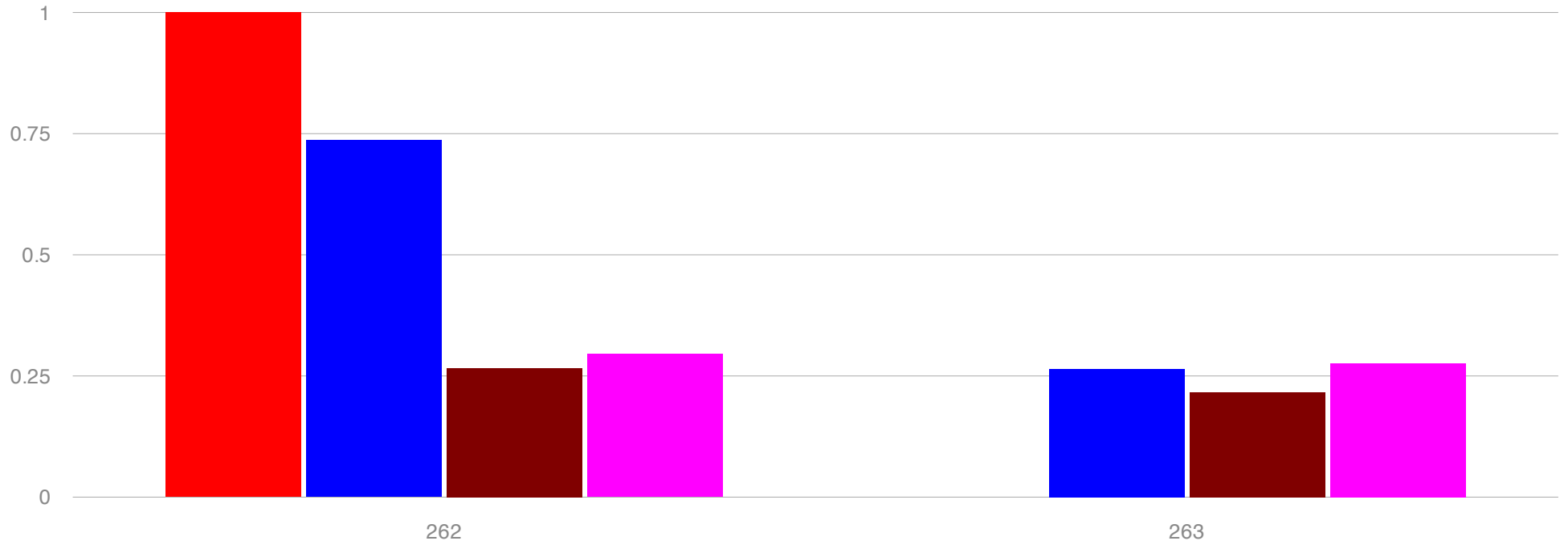
- **Safety.** How to best improve the safety of off-road traffic by changing driver's license requirements for off-road traffic and requiring training for snowmobile riders?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 245: Snowmobilers should be encouraged to register with local or national snowmobiling clubs to receive training and information about off-road traffic safety.
 - 246: Snowmobile owners should be encouraged to join their local snowmobile club to be informed about areas that allow snowmobile riding.
 - 247: Snowmobile owners should be encouraged to join their local snowmobile club to be informed about new regulations and restrictions in riding areas by, for instance, a group text-messaging system.
 - 248: Snowmobile owners should be encouraged to join their local snowmobile club. The police and other officials could use this communication channel to reach all members
 - 241: If there was a specific driver's license for off-road traffic, it should be sufficient if the group guide is a license holder when a group is snowmobile riding.
 - 242: If there was a specific driver's license for off-road traffic, one driver's license could be valid for all off-road traffic and road transit.
 - 243: If there was a specific license for off-road traffic, those who would have an off-road traffic driver's license should have more rights to ride freely off established routes than those who have not.
 - 244: The off-road traffic driver's license training should provide information on forestry economy, environmental values, navigation etc.
 - 239: A driver's license for regular cars should be required for riding off-road vehicles.
 - 238: A specific off-road traffic driver's license should be created.
 - 240: An off-road traffic driver's license should have the same requirements as a motorcycle license.
-



Topic

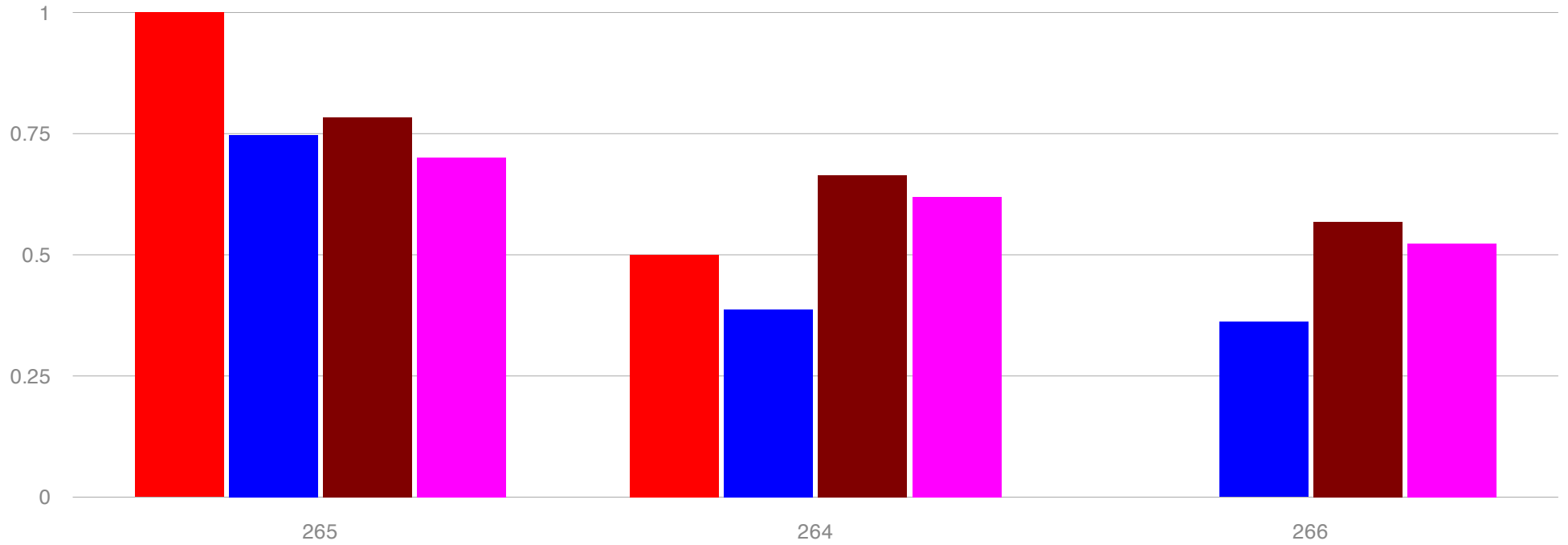
- **Safety.** How to best improve the safety of off-road traffic by defining requirements for the vehicle equipment?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 262: License plates and turn signals (indicators/blinkers) should be required on all snowmobiles.
- 263: Only snowmobiles with roller width of at least 50 cm and/or length of 390 cm should be allowed. Minimum length for a narrow roller should be 4 meters. These wider snowmobiles better remain on the snow surface.



Topic

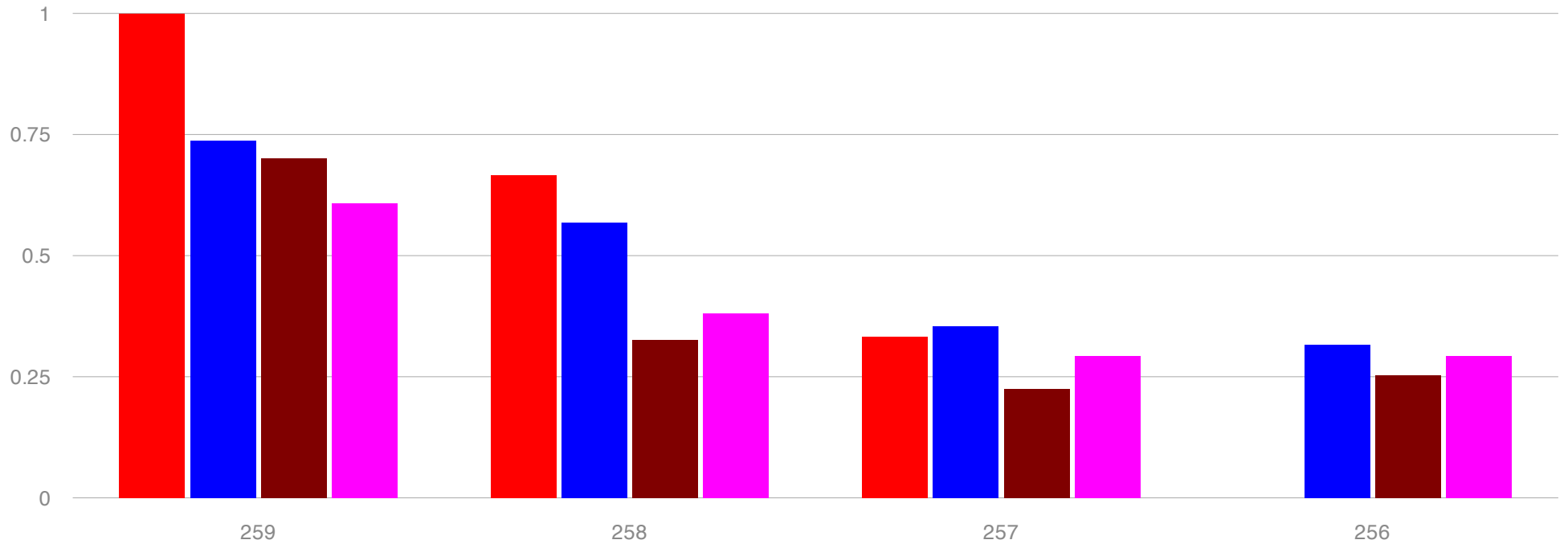
- **Safety.** How to best improve the safety of off-road traffic by increasing the number of routes, allowing riding on regular roads and legalizing off-route traffic to connect between routes or trails?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 265: In addition to official routes, there should be areas that are designated for “free snowmobile riding”. In these ‘free-riding zones’ for snowmobile riding, riding is not limited to designated routes.
- 264: Improve safety by creating more routes in areas where it is safer to ride a snowmobile.
- 266: Snowmobile riding on regular roads should be allowed provided riders are equipped with motorbike insurance, license plates, properly installed turn signals, and lights.



Topic

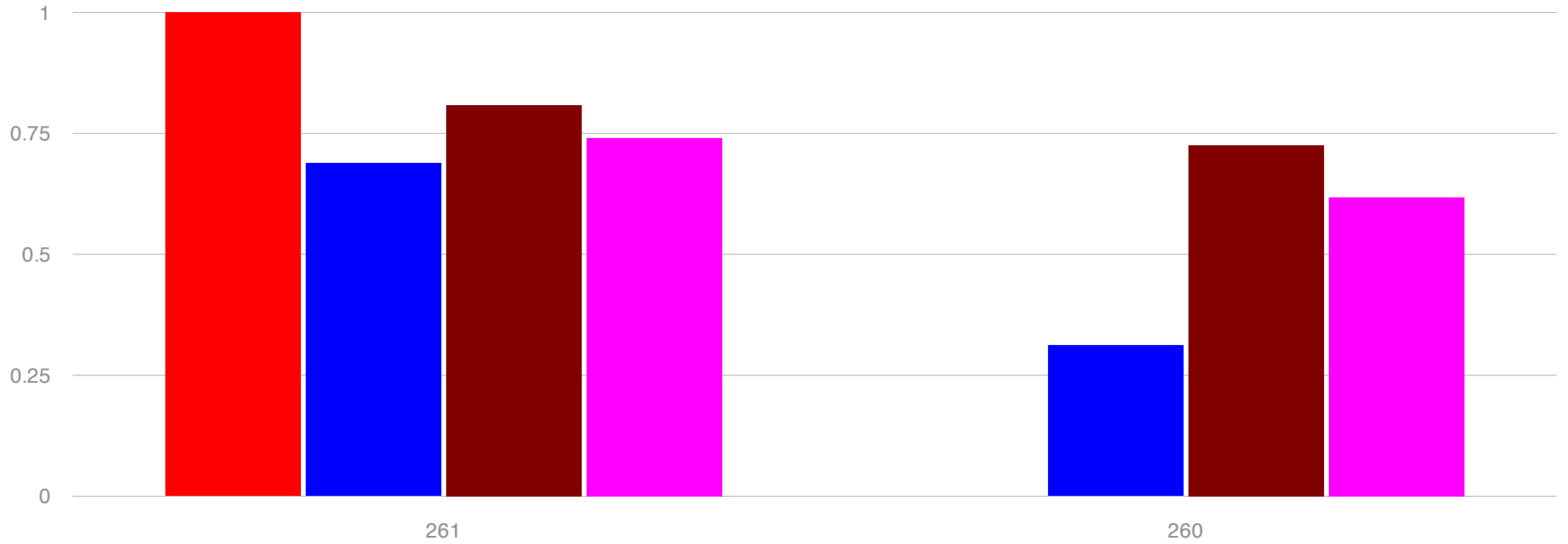
- **Safety.** How to best improve the safety of off-road traffic by regulating monitoring systems?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 259: Landowners should be authorized to ban repeating off-road traffic regulation offenders from their property.
- 258: Improve safety by deploying more police forces to monitor off-road traffic.
- 257: RFID-sticker should be added to all vehicles.
- 256: GPS-tracking system should be added to all vehicles so that vehicles can be located when needed and risky areas can be mapped.



Topic

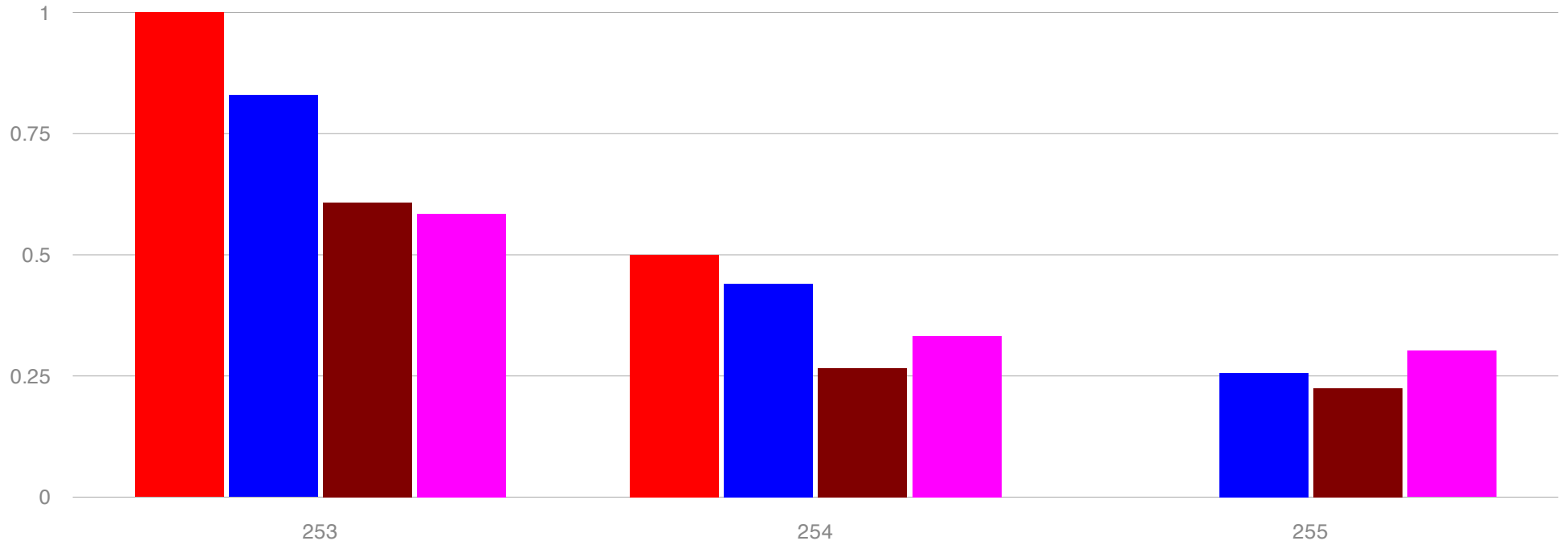
- **Safety.** How to best improve the safety of off-road traffic by regulating the alcohol tolerance level in off-road traffic?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 261: The blood alcohol limit for snowmobiles should be the same as for other motorized vehicles.
- 260: A zero alcohol tolerance should be set for off-road traffic.



Topic

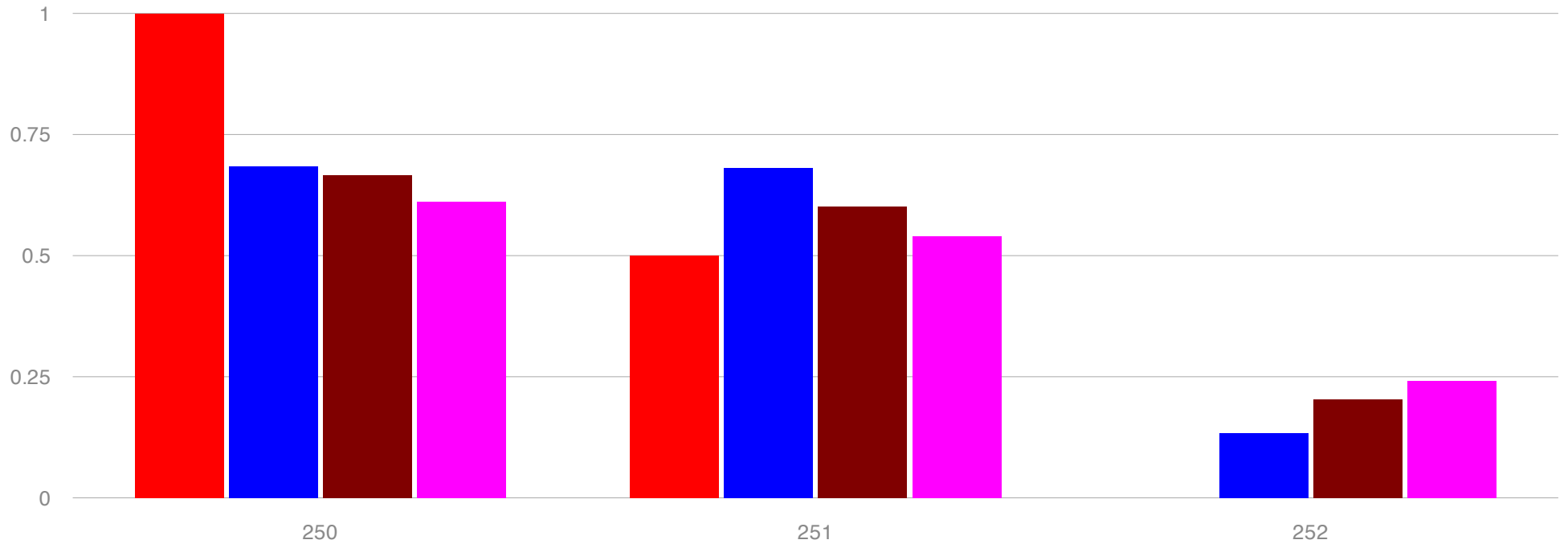
- **Safety.** How to best improve the safety of off-road traffic by traffic arrangements?

Metric Legend

- Copeland
- Borda
- Median
- Mean

Proposals

- 253: The use of right-hand side traffic should be made the norm when riding in open areas such as on ice and in swamps. Riders should pass route signs on the right side. This would decrease the number of accidents.
- 254: Roundabouts should be built in route intersections when there's space for those.
- 255: The speed limit for snowmobiling should be set at 60km/h in all areas.



Topic

- **Safety.**How to best improve the safety of off-road traffic by regulating driving age?

Metric Legend

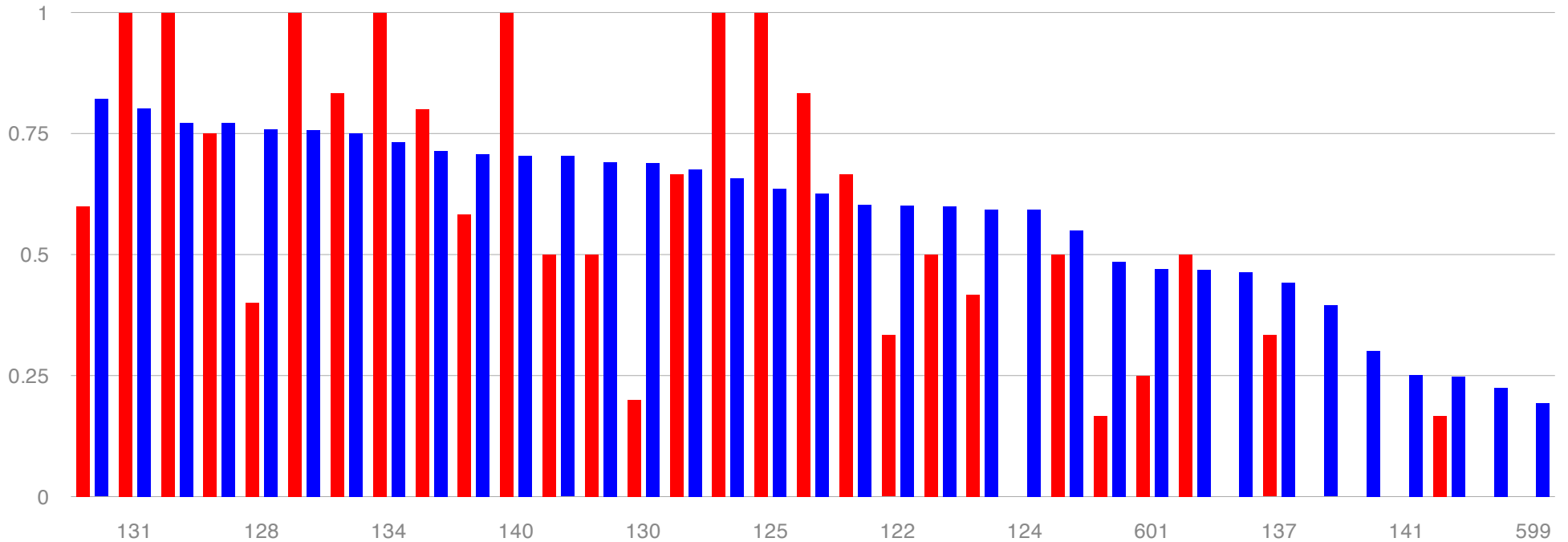
- Copeland
- Borda
- Median
- Mean

Proposals

- 250: The age requirement for riding off-road vehicles should be kept at 15 years.
- 251: The age requirement for riding off-road vehicles should be changed to 12 years with certain conditions: 12-year olds should be allowed to ride off-road vehicles when accompanied by a supervising driver age 18 and older who has a license valid for off-road vehicles. For independent riding the age requirement should be kept at 15 years.
- 252: The age requirement for riding off-road vehicles should be changed to 9 years.

Finnish off-road traffic proposal aggregation: Category statistics

The following charts show how proposals are rated based on several metrics. Each chart represents one group of topics and each proposal has a set of bars representing the score of the proposal based on different metrics. The proposals are listed underneath each graph in the same order (top to bottom) as shown on the graph (left to right).



Group

- Location of routes.

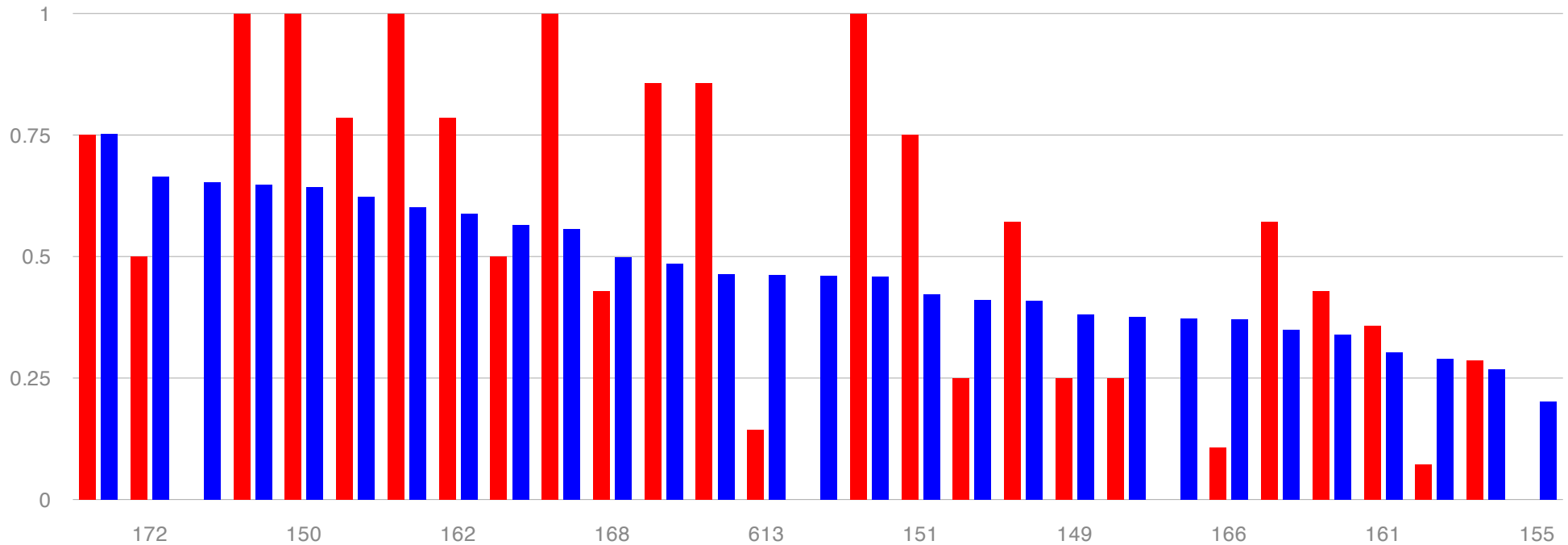
Metric Legend

- Copeland
- Median

Proposals

- 610: The granting of permits for riding along powerlines should be simplified.
- 131: Middle-sized powerlines and large powerlines and the sides of fields for agricultural use should be free to use for off-road traffic.
- 144: The Swedish model for off-road traffic should be applied at least to Lapland.
- 602: Professional use of off-road vehicles (snowmobiles and ATV's) like reindeer husbandry and professional fishery should remain permitted off routes and trails.
- 128: Given that existing powerlines and the sides of fields for agricultural use would be used by off-road traffic, landowners should mark Christmas tree fields so that they do not get destroyed by traffic.
- 603: The Swedish model should be followed: there should be more freedom to ride snowmobiles off established routes and trails.
- 142: Lapland, the northern part of Finland, should have more areas reserved for free, unrestricted driving than other parts in Finland because there's so much undeveloped land.
- 134: Small roads meant for tractors in the summer should be opened for snowmobiles in the winter.
- 127: New routes should be established along power grid lines. Trees are typically cut in these areas so they are good places to ride.
- 147: When deciding on off-road traffic regulations for Lapland in particular, a larger number of affected parties should be consulted. These parties include officials of northern municipalities, especially Kittilä, the Finnish Forest and Park Service, and snowmobile clubs.
- 140: When deciding the location of routes, landowners can indicate which areas they don't want to be used.
- 132: New routes should be established based on existing routes even if they are at the moment classified as illegal.
- 126: Valtion omistamilla mailla kriteerien tulisi olla erilaiset reiteille, jotka kulkevat suojelluilla luontoalueilla ja reiteille, jotka kulkevat tavallisilla luontoalueilla.
- 130: Short ring routes should be established around hydro-electric power plants. This would help create a nationwide body route network that utilises existing power lines and reservoirs of large rivers.
- 139: When a route is planned, landowners should be encouraged to indicate which areas they don't want to be used on their property.
- 121: There should be more routes in the Eastern and Northern parts of Finland.
- 125: Uusia reittejä koskevan sääntelyn tulisi olla erilaisia reiteille, jotka kulkevat yksityisillä mailla ja reiteille, jotka kulkevat valtion omistamilla mailla.
- 135: Routes should respect a certain minimum distance to gardens, cowsheds and houses.
- 119: Undeveloped land beyond residential areas should be made available as free-riding zones.
- 122: Co-operation with Russia should be sought to determine locations of routes at the border.
- 138: "No-go areas" should be established for farming and agriculture purposes. A no-go-area refers to a zone in which off-road traffic is absolutely banned.
- 146: Residents in Lapland should have the right to ride freely inside their county. This means they should be allowed to ride off routes and trails.
- 124: Uusia reittejä koskevan sääntelyn tulisi olla erilaista Pohjois-Suomessa sijaitseville reiteille ja Etelä-Suomessa sijaitseville reiteille.
- 600: Snowmobile riding for leisure should be permitted only on routes and it should be regulated under the general Road Traffic Act (267/1981). Snowmobile riding for other purposes than leisure, such as for professional use like reindeer husbandry and professional fishery, should remain permitted off routes.
- 145: Snowmobile riding in large national parks in Lapland should be allowed.
- 601: Individuals with special needs should be taken into consideration when setting routes.

- 143: Riding off-road vehicles and ATV's to fishing lakes in the northern, sparsely populated areas in Finland should be allowed. Otherwise fishing is impossible.
- 129: The location of routes should be determined based on where noise is already prevalent, such as industrial areas and populated areas.
- 137: The location of routes has to follow the urban zone planning and should not interfere with zoning plans.
- 148: The off-road traffic law should not give some users (e.g., reindeer owners) special rights because these rights would water down the whole law.
- 133: The location of routes should be determined based on GPS-acquired data.
- 141: If endangered species and other wildlife are discovered when a route or a trail is planned, then a private nature reserve should be created.
- 136: Untouched nature and wilderness should not be used for off-road traffic.
- 117: There should be no routes on private land but instead all routes should be located on state-owned land.
- 599: Off-road traffic should be allowed only for professional use, not for leisure.



Group

- Establishing new routes.

Metric Legend

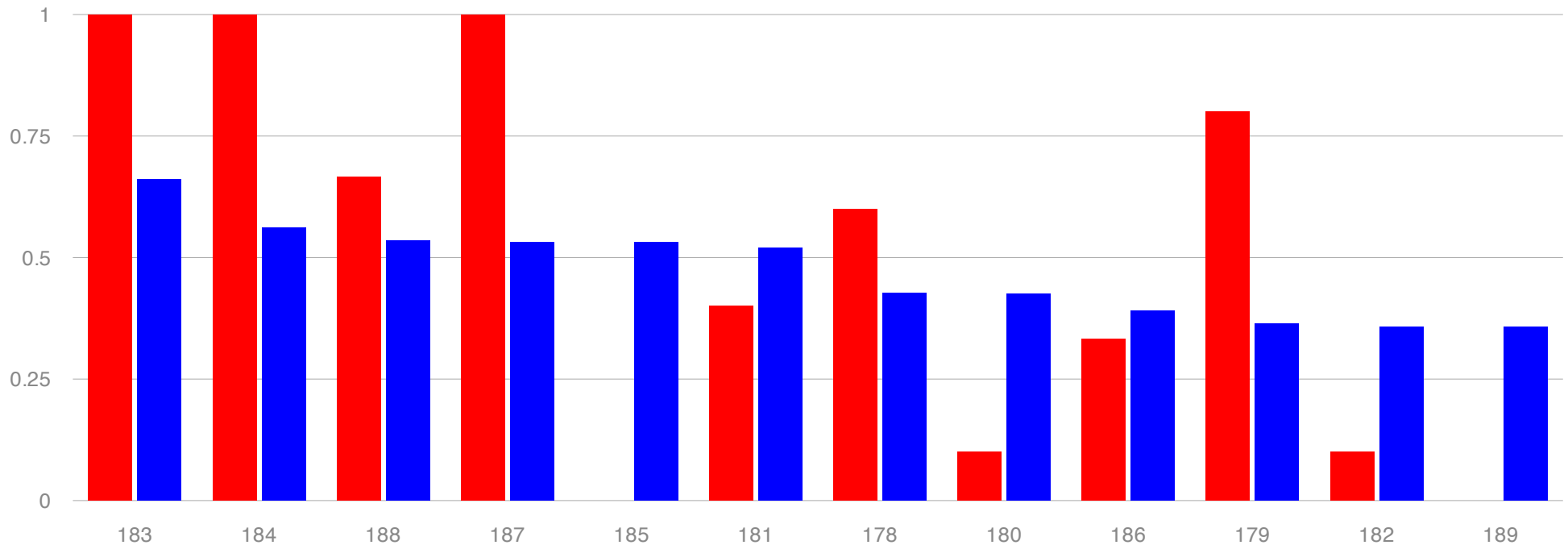
- Copeland

- Median

Proposals

- 173: Route and trail maintenance should be organised so that at least in southern Finland snowmobile riding clubs and the municipalities co-operate in order to lower maintenance costs.
- 172: Route and trail maintenance responsibilities should be defined in the route planning phase.
- 171: Route and trail maintenance should be organised so that the law defines whose responsibility it is to take care of thicket growing on routesides.
- 170: Route and trail maintenance should be organised so that a usage fee for riding on routes and trails inside a municipality is collected. The income from the fee should be used to maintain and develop routes and trails.
- 150: It should be possible to establish a route on private property without the landowner's consent but only when this does not cause harm to the landowner.
- 169: The validity of the permit criteria for a route should be regularly verified to check if they still make sense and if the route still fulfills the criteria.
- 163: The route plan should include a description of use and the landowner should have a right to demand an update to the route plan to correspond to the present situation or closing of the route.
- 162: If the route does not follow the description of use that was approved in the planning phase, the landowner should have a right to demand updating the route plan to correspond to the present situation and closing of the route.
- 152: There should be more strict and clear criteria in the existing law for justifying bypassing landowners' consent when establishing a new route.
- 176: Reconstruction of the natural environment (returning the natural environment to what it was like before a route was established) should be organized so that the route administrator is responsible for any harm and repairs necessary due to the route.
- 168: Route permits should be granted for fixed terms and if no renewal application is submitted, the route expires. The land monitoring agency would have a register of all routes and notify the permit holder when the route permit is about to expire.
- 157: Route permits should be granted for an unlimited time, i.e. the fulfillment of the permit criteria shouldn't be checked on a regular basis.rkastaa säännöllisesti.
- 156: Route permits should be granted for fixed terms, i.e. the fulfillment of the permit criteria should be checked after the end of each term.
- 613: Permits for off-road traffic competitions and trainings should have to be renewed yearly
- 177: Reconstruction of the natural environment (returning the natural environment to what it was like before a route was established) should be organized so that the route users are responsible for any harm and repairs necessary due to the route.
- 154: The Finnish Forest and Park Service should be granted a veto right (right to prevent a route or trail on their lands) concerning routes or trails in preservation areas that it governs.
- 151: It should be possible to establish a route on private property, but the need for a route should be justified by more important reasons than improving the public traffic network or common recreational use.
- 167: Regardless of whether or not route permits are granted for fixed terms or an unlimited time, the landowner should have the right to continue or discontinue the agreement on which the permit is based.

- 165: If the effects of a route are higher than estimated in the planning phase, the route should be temporarily discontinued.
- 149: It should not be possible to establish a route on private property without the landowner's consent. Landowners should have an ultimate right to control their own property.
- 174: Route and trail maintenance should be organised so that the planning, maintaining and building of off-road traffic routes are paid for by the snowmobile associations.
- 153: It should be possible to establish a route on private property without the landowner's consent whenever there's a need to set up a route.
- 166: The landowner should have a right to close a route with a 6-months advance notice.
- 159: If a route permit has been granted but the route is not created, the route permit should be annulled if the landowner requests it.
- 158: If a route permit has been granted but the route is not created, the route permit should be automatically annulled.
- 161: If a route permit has been granted but the feasibility of the route plan is not inspected on a yearly basis, the route permit should be annulled at the landowner's request.
- 164: If a route is misused, the landowner should have the right to close the route without advance notice.
- 160: If a route permit has been granted but the feasibility of the route plan is not inspected on a yearly basis, the route permit should be automatically annulled.
- 155: The state or any other public institution should not be obliged to accept routes on their land. They should be granted a veto right regarding planned routes on their land.



Group

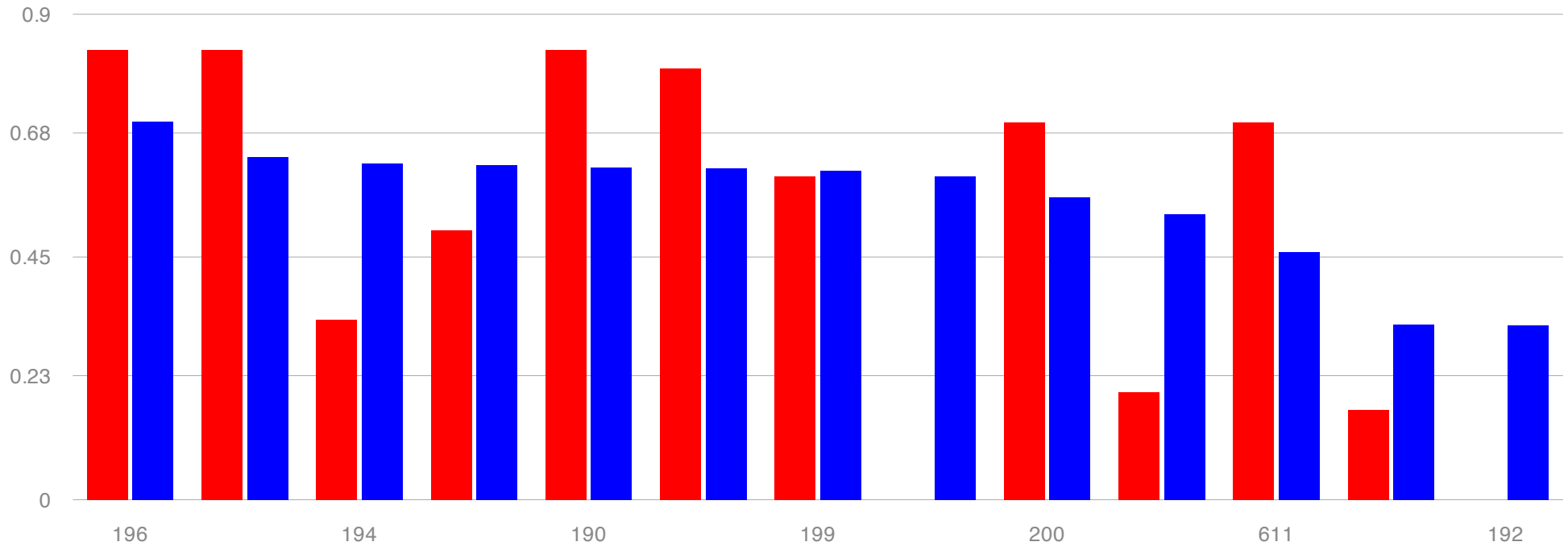
- Choice of the responsible authorities for deciding on new routes.

Metric Legend

- Copeland
- Median

Proposals

- 183: Decision-makers of new routes should vary depending on whether the route is a small local connection or part of the national network. The local authority (municipality) would decide on local routes and a county or a national authority about wider route networks.
 - 184: If the municipalities remain the authority responsible for approving new routes, they should be obliged to gather basic information on off-road traffic and to monitor off-road traffic.
 - 188: All complaints about issues related to off-road traffic law should be processed by the same administrative court (in the city of Vaasa in Finland), which already deals with environmental and water permit complaints.
 - 187: Complaint procedures concerning routes should be more explicitly included in the off-road traffic law.
 - 185: If the ELY centres will be responsible for making decisions on off-road traffic, then they should be in charge of gathering information on off-road traffic.
 - 181: The establishment of new routes should not be decided upon by a public authority but through private agreement between snowmobilers and landowners, and possibly via snowmobile clubs.
 - 178: The municipal officials should remain the responsible authority to decide on establishing new routes.
 - 180: The ELY centres (Centre for Economic Development, Transport and the Environment) should be the responsible authority to decide on establishing new routes.
 - 186: Complaints concerning off-road traffic law, such as establishing new routes, should be more often responded to by administrative courts.
 - 179: Decisions on establishing new routes should be made by an environmental panel in a municipality.
 - 182: 'No-go areas' for off-road traffic should be decided upon either by the Ministry of the Environment or the Finnish Environment Institute (SYKE). 'No-go areas' refer to zones in which off-road traffic is banned.
 - 189: The right to complain about routes for off-road traffic should be extended to include more stakeholders, such as landowners, practitioners, guardians of the common good and environmental organisations. The Ministry of the Environment, ELY centres (Centre for Economic Development, Transport and the Environment) and Metsähallitus' nature services should also have the right to complain.
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Group

- Route-setting procedures.

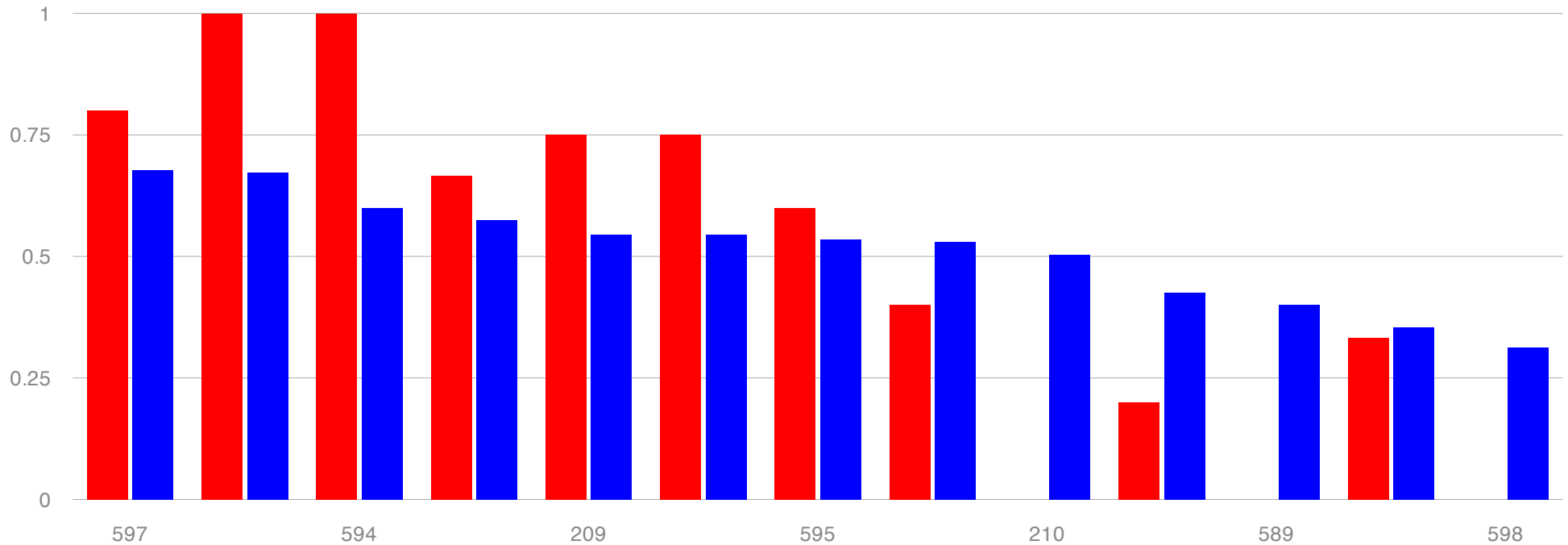
Metric Legend

- Copeland
- Median

Proposals

- 196: When planning, renewing or building an off-road traffic route on private property, all affected parties should be contacted by personal mail or other means.
- 191: Criteria for route permits for new routes and related impact evaluations should be made public and published online.
- 194: Any plans for new routes should be communicated locally early and widely, even before a landowner meeting is scheduled. This could be done through newspaper announcements, so that locals have a chance to familiarise themselves with the plans and the anticipated consequences of the planned route.
- 195: The route plan should be made accessible to the public at least 30 days before decisions are made. This regulation is currently part of the Outdoor Recreation Act in Finland. (606/1973).
- 190: All hearings and decisions about route plans and route-setting procedures should be announced online and in the local newspaper.

- 201: A route plan should include a description of the anticipated route usage.
- 199: When applying for a new route, the applicant should present an extensive route plan.
- 202: Route plans should also be made for ice-covered grounds if those are part of a route.
- 200: Applications for routes meant for common use should require proper route plans indicating the location, anticipated traffic amounts, and types of vehicles expected to use the route.
- 612: During the route-planning phase, a proper and thorough evaluation should be conducted that assesses the impacts of the route for the natural environment.
- 611: A proper impact evaluation should be conducted for each route.
- 193: Neighbors should be invited to route planning events, even if the route or trail is established based on a two-way agreement between the landowner and a snowmobiler only.
- 192: Environmental experts (e.g. environmental associations) should be involved in route planning activities and events.



Group

- Route impact evaluations.

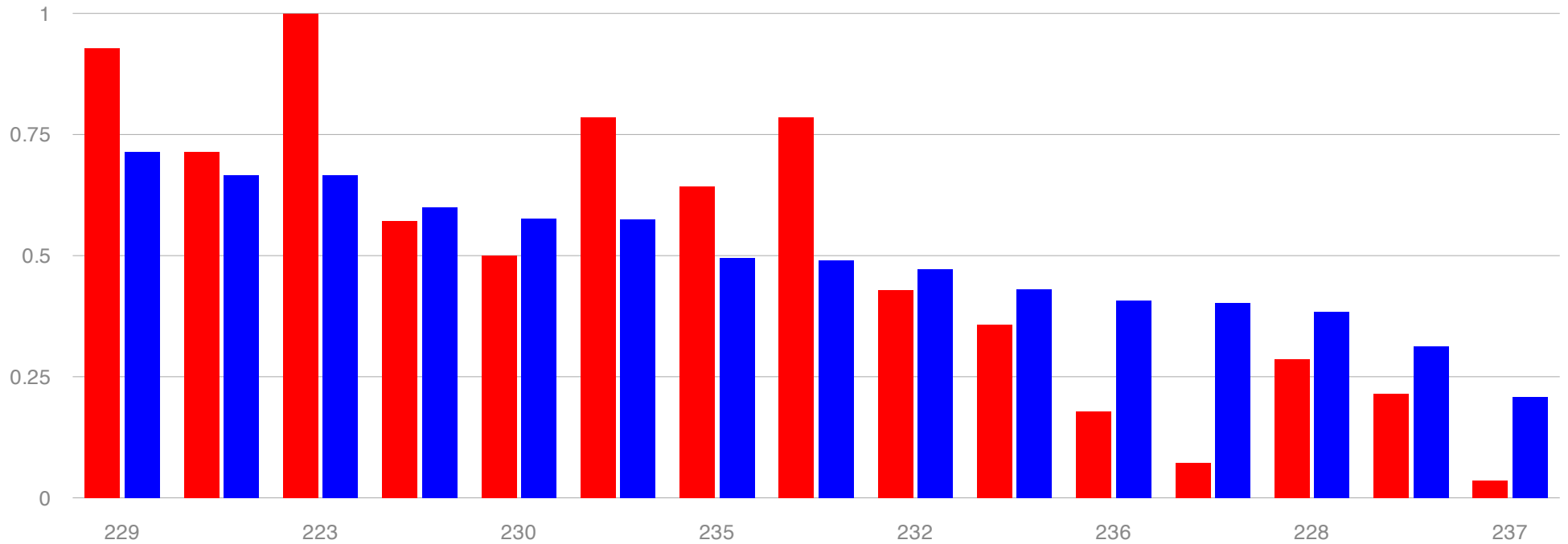
Metric Legend

- Copeland

- [Median](#)

Proposals

- 597: Impact evaluations should include alternative locations for the planned route.
 - 592: Impact evaluations should include proposals on how the routes could bypass sensitive wildlife areas
 - 594: Impact evaluations should cover the full life-span of a route, i.e. the construction period, the period during which the route is in use, and the period after the route is no longer in use.
 - 591: Impact evaluations should include proposals on how to mitigate the harm to nature.
 - 209: Impact evaluations should include a cost-benefit analysis for all parties involved (i.e., who benefits from the route and by how much, who is harmed and loses out because of it, and by how much).
 - 208: Impact evaluations should include all the estimated financial pros and cons.
 - 595: Impact evaluations should include an explanation and justification for the claimed need for a route.
 - 596: Impact evaluations should include an explanation of the consequences if the route won't be established.
 - 210: Impact evaluations should include an estimate of how many state funds will be used for the route and how much revenue the route will bring in return.
 - 593: Impact evaluations should take into account the joint effects of any other ongoing or planned projects in the area that add to the area's noise and traffic levels. For instance they should take into account any planned development sites and other projects carried out simultaneously that impact the area's levels of noise and traffic.
 - 589: Impact evaluations should include an estimate of the impact of the route on endangered species.
 - 590: Impact evaluations should include an estimate of the impact of the route on water pollution and noise levels
 - 598: Existing GPS-tracking data of snowmobile traffic should be used when drafting the impact evaluation. The data could be used to verify the amount of traffic and to estimate the impact.
-



Group

- Financial compensation for landowners.

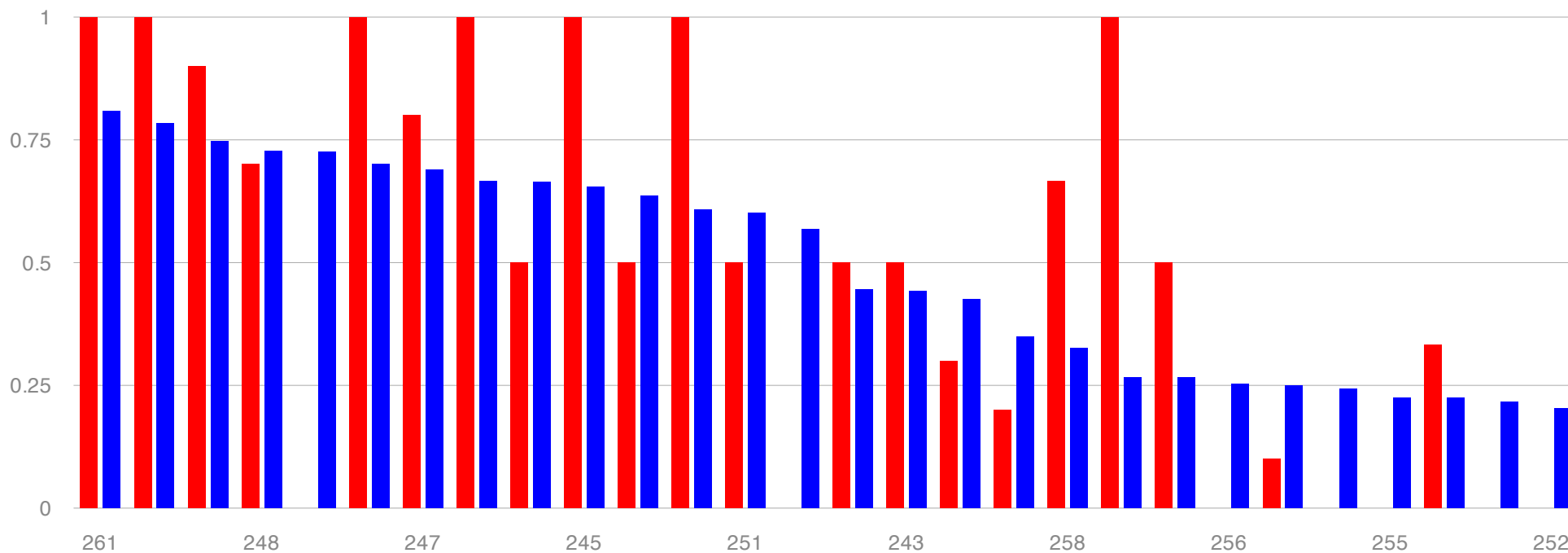
Metric Legend

- Copeland
- Median

Proposals

- 229: Financial compensation should be given to private landowners, but the use of existing state-owned routes should remain free of charge.
- 224: The amount of compensation for landowners should be calculated separately for summer and for winter periods.
- 223: Multiple factors, such as land quality, agriculture, farming and forestry, should be taken into account in order to fairly calculate the amount of compensation owed to landowners.
- 225: Local forestry associations should be consulted when negotiating a compensation amount.
- 230: The financial compensation for landowners should be organized so that drivers pay for the route maintenance and are given a sticker to prove their payments.
- 231: Temporary route usage permits to non-members of the local clubs should be granted; payments would be supervised in the same way as an automobile tax, for instance.

- 235: The amount of financial compensation for landowners can be calculated by taking into account the estimated profit from the land (from agriculture or forestry). Compensation for agricultural land should be four times bigger than for forests.
- 233: Proper financial compensation for landowners should be paid and routes should be based on voluntary usage agreements.
- 232: The financial compensation for landowners should take into account that snowmobile riders can ride along existing powerlines and other already existing paths, which are suitable for snowmobile riding. The sum plus interest should be given to the landowner at the end of the year.
- 226: The amount of compensation to landowners should be organized so that a usage fee (including a recurring payment like a rent and compensation for possible damages) is collected from drivers in the beginning of the year and the sum plus interest is given to the landowner at the end of the year.
- 236: The amount of financial compensation for the landowner should be paid for all routes and trails and agreed upon by the snowmobile club and the landowner. If no agreement on the amount can be reached, no route can be established.
- 234: Financial compensation for landowners should be paid and all costs of routes should be paid by the snowmobile clubs.
- 228: The amount of compensation for landowners should be the same as in the Swedish and Norwegian model: 150 euros per snowmobile.
- 227: Compensation for landowners should be 1 Euro (\$1,34) per 1 meter (1,09 yards). A snowmobile club would collect the payments from its members and pass them on to landowners. For example, 1 kilometer (0,62 miles) of snowmobile trail would require 1,000 euros (\$1,380) that would be divided by the number of members in a snowmobile club.
- 237: Landowners shouldn't be compensated at all if a route or a trail crosses their property.



Group

- Safety.

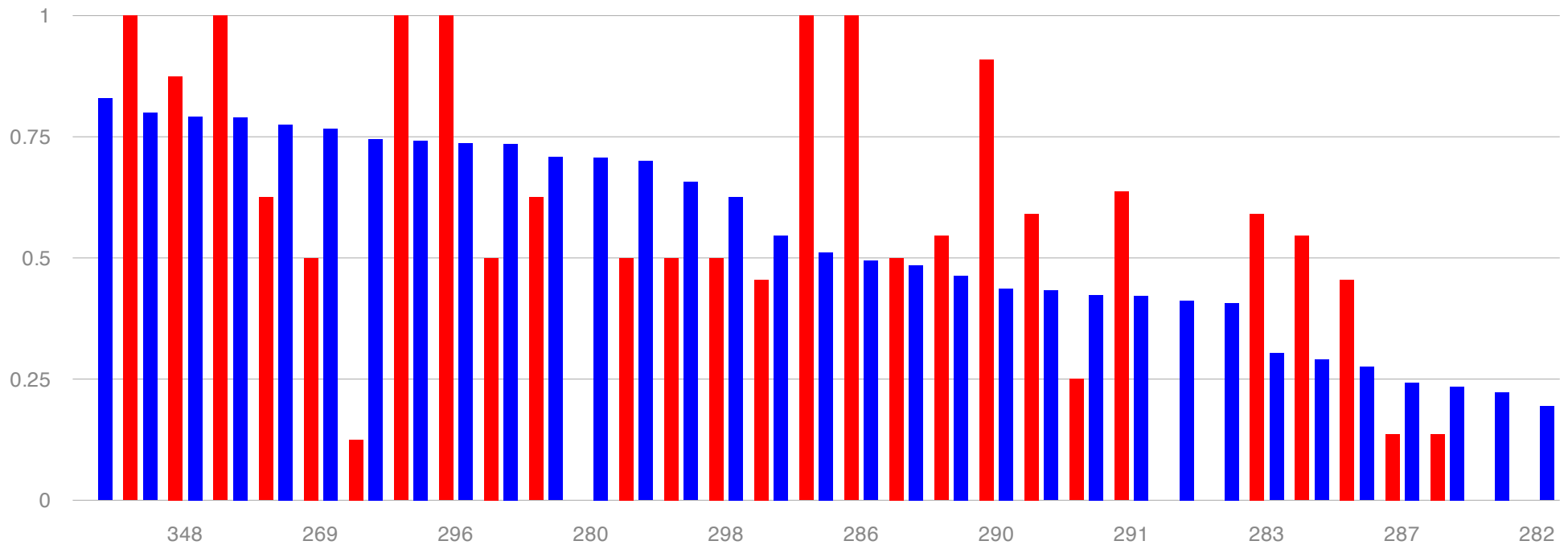
Metric Legend

- Copeland
- Median

Proposals

- 261: The blood alcohol limit for snowmobiles should be the same as for other motorized vehicles.
- 265: In addition to official routes, there should be areas that are designated for “free snowmobile riding”. In these ‘free-riding zones’ for snowmobile riding, riding is not limited to designated routes.
- 246: Snowmobile owners should be encouraged to join their local snowmobile club to be informed about areas that allow snowmobile riding.
- 248: Snowmobile owners should be encouraged to join their local snowmobile club. The police and other officials could use this communication channel to reach all members
- 260: A zero alcohol tolerance should be set for off-road traffic.
- 259: Landowners should be authorized to ban repeating off-road traffic regulation offenders from their property.
- 247: Snowmobile owners should be encouraged to join their local snowmobile club to be informed about new regulations and restrictions in riding areas by, for instance, a group text-messaging system.
- 250: The age requirement for riding off-road vehicles should be kept at 15 years.
- 264: Improve safety by creating more routes in areas where it is safer to ride a snowmobile.
- 245: Snowmobilers should be encouraged to register with local or national snowmobiling clubs to receive training and information about off-road traffic safety.
- 242: If there was a specific driver’s license for off-road traffic, one driver’s license could be valid for all off-road traffic and road transit.
- 253: The use of right-hand side traffic should be made the norm when riding in open areas such as on ice and in swamps. Riders should pass route signs on the right side. This would decrease the number of accidents.
- 251: The age requirement for riding off-road vehicles should be changed to 12 years with certain conditions: 12-year olds should be allowed to ride off-road vehicles when accompanied by a supervising driver age 18 and older who has a license valid for off-road vehicles. For independent riding the age requirement should be kept at 15 years.
- 266: Snowmobile riding on regular roads should be allowed provided riders are equipped with motorbike insurance, license plates, properly installed turn signals, and lights.
- 241: If there was a specific driver’s license for off-road traffic, it should be sufficient if the group guide is a license holder when a group is snowmobile riding.
- 243: If there was a specific license for off-road traffic, those who would have an off-road traffic driver’s license should have more rights to ride freely off established routes than those who have not.
- 244: The off-road traffic driver’s license training should provide information on forestry economy, environmental values, navigation etc.

- 239: A driver's license for regular cars should be required for riding off-road vehicles.
- 258: Improve safety by deploying more police forces to monitor off-road traffic.
- 262: License plates and turn signals (indicators/blinkers) should be required on all snowmobiles.
- 254: Roundabouts should be built in route intersections when there's space for those.
- 256: GPS-tracking system should be added to all vehicles so that vehicles can be located when needed and risky areas can be mapped.
- 238: A specific off-road traffic driver's license should be created.
- 240: An off-road traffic driver's license should have the same requirements as a motorcycle license.
- 255: The speed limit for snowmobiling should be set at 60km/h in all areas.
- 257: RFID-sticker should be added to all vehicles.
- 263: Only snowmobiles with roller width of at least 50 cm and/or length of 390 cm should be allowed. Minimum length for a narrow roller should be 4 meters. These wider snowmobiles better remain on the snow surface.
- 252: The age requirement for riding off-road vehicles should be changed to 9 years.



Group

- Illegal riding.

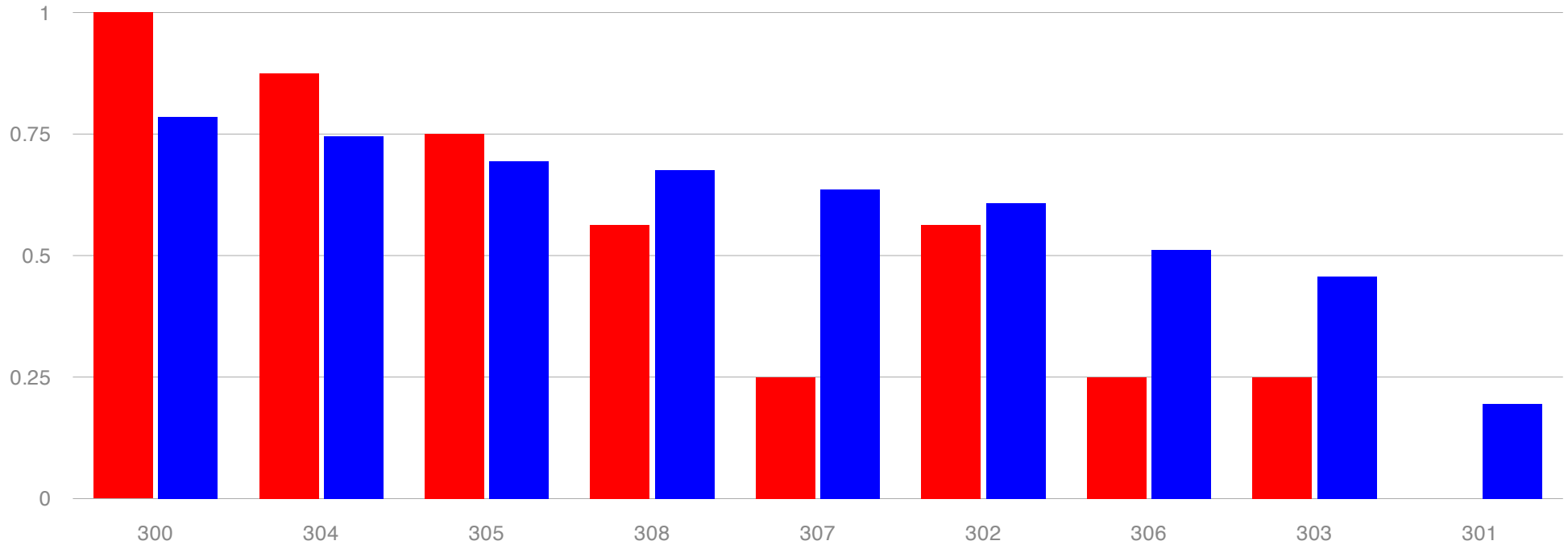
Metric Legend

- Copeland
- Median

Proposals

- 268: Off-route traffic from home to routes should be made legal.
- 267: Snowmobiles should be allowed to use roads and shoulders for off-route traffic to connect between routes or trails.
- 348: More routes for off-road traffic should be established, so that there's less need for illegal riding.
- 270: 'Free riding areas' like in Sweden should be created for routeless snowmobile riding for everybody.
- 271: Residents in sparsely populated areas of Lapland and Northern Finland should be allowed to ride snowmobiles off routes because in these areas, snowmobiles are used as a means of transportation. In order to use snowmobiles as a means for daily commute, it is claimed that residents in Northern parts of Finland can't stay on routes or trails because there's not enough of these, and also the need for mobility on snowmobiles is constantly changing.
- 269: Transfer to routes via private land using existing trails (power lines, open swamp areas etc.) and roads used by other vehicles should be legalized. The offender should pay for any harm he or she causes. If the offense is grave, offenders could be fined.
- 273: Tourists in Lapland should be allowed to buy temporary permits to use 'free riding zones', with which one can ride anywhere and doesn't need to follow routes or trails. These free riding zones don't exist yet, but should be established.
- 587: Going around obstacles on a route should be allowed even if there is no existing route or trail to do so. The current law states that obstacles must be passed via existing routes. This forces riders to make long detours, causing delays and extra kilometers.
- 296: Any harm caused should be compensated by the offender and if the offense is grave, they should be fined.
- 350: Landowners should have more flexibility to decide about off-road traffic on their land. They should be able to create free-riding zones and no-go areas on their lands. Landowners should then be given tools to easily designate areas on their land to which they grant snowmobiles access. Clear pointers to indicate free-riding zones and no-go areas should be placed on digital maps. Landowners would only need to indicate to the local authority in which areas they prohibit snowmobile access and that information would be transferred to digital maps. Since there would be more areas for legal traffic, illegal traffic would decrease.
- 349: Landowners should be allowed to ride unregistered vehicles on their own land.
- 280: Parking areas for off-road vehicles should be created near route starting points. At the moment, there is a lack of parking areas near route starting points, and therefore off-road traffic route users have to ride illegally along regular roads to reach routes.
- 274: Free riding (meaning riding anywhere off routes and trails) in Lapland should be allowed except in areas restricted due to farming needs, such as reindeer breeding period.
- 281: There should be more clear signs on off-road traffic routes to indicate free-riding zones and no-go areas. Signs could be put in place either by landowners, snowmobile club associations or other authorized entities.
- 298: It should be obligatory for all off-road vehicles, also ATV's, to be registered with The Transport Safety Agency (Trafi). Trafi is in charge of vehicle registration and maintains the Vehicle Register in Finland.
- 292: Forest rangers should be granted monitoring rights to off-road traffic.
- 299: Off-road vehicles that are meant for professional use, such as forestry and farming, shouldn't need to be registered. The same applies to off-road vehicles that are used for maintaining cross-country ski trails and such.

- 286: License plates should be required for all off-road vehicles in order to track if usage fees have been paid.
 - 295: Fines for offenders should be defined. If someone repeatedly breaks the rules, the state could confiscate their vehicle and/or landowners could ban said rider from their land.
 - 289: Land-owners should be granted monitoring rights to monitor off-road traffic on their land.
 - 290: The police should be granted rights to take action against off-road traffic violations.
 - 293: A personal driving permit should be required from snowmobile owners for a specific area
 - 272: Free riding (meaning riding anywhere beyond routes and trails) in Lapland should be allowed under the condition that the driver is a permanent resident of one of the counties in Lapland.
 - 291: Illegal off-road traffic can be decreased by granting monitoring rights to the Border Control.
 - 352: Snowmobile trails should be turned into routes, as it would permit carrying a hunting rifle on a snowmobile.
 - 297: A new registration category for off-road vehicles should be created for the purposes of off-road traffic: all vehicles should be insured and equipped with license plates, no indicator lights would be required, speed limit would be 80 km/h and riding on motorways would not be allowed.
 - 283: RFID stickers should be used to monitor vehicles on snowmobile trails. Stickers should be sold nearby the trails on easily accessible locations such as gas stations.
 - 288: A license plate, which would be a sticker glued to the front cover glass of a snowmobile, should be made mandatory.
 - 285: More police force should be deployed to monitor off-road traffic.
 - 287: Distance tracking (RFID, GPS) of all off-road vehicles should be used to monitor if usage fees for trails have been paid.
 - 284: Snowmobiles should be required to have an individual chain marking to enable tracking illegal riding. The 'chain marking' is a unique trace that a snowmobile's chain leaves on snow. Thus illegal riders could be identified by identifying their traces.
 - 294: The equipment of law violators and offenders should be confiscated.
 - 282: GPS-tracking of vehicles should be used to monitor traffic and identify illegal riders.
-



Group

- Preparatory process.

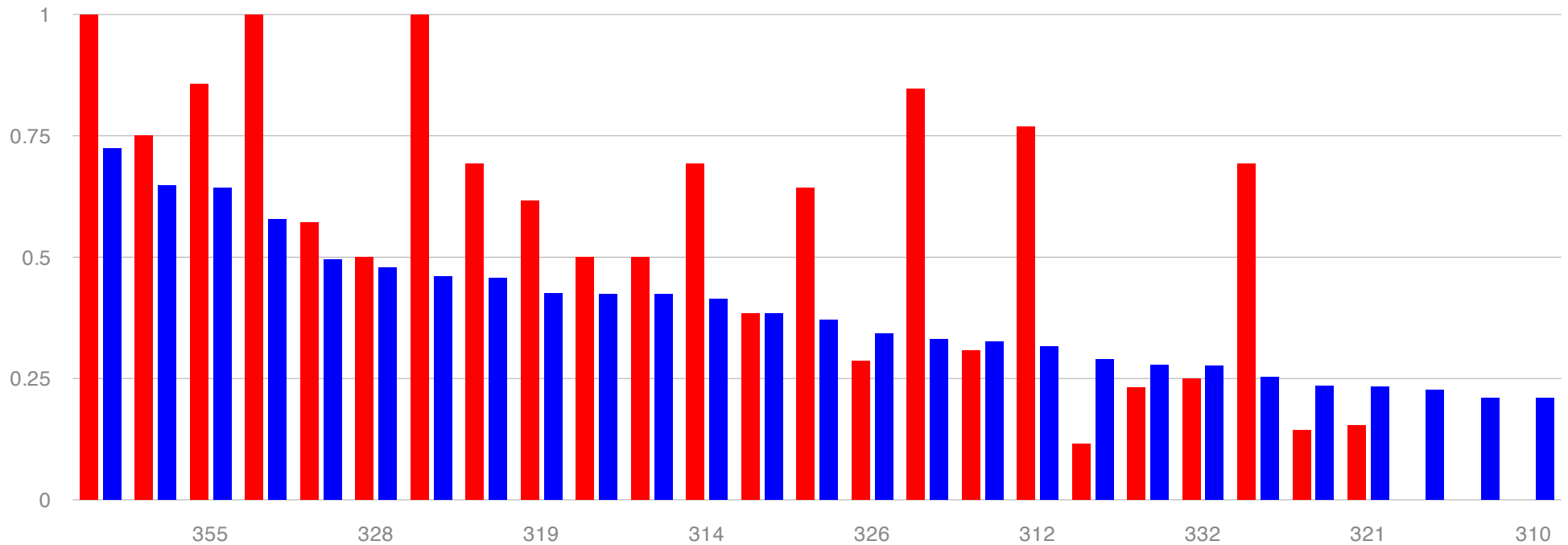
Metric Legend

- Copeland
- Median

Proposals

- 300: The law reform should be inspired by the Swedish law that is generally considered more permissive than the current Finnish law.
- 304: All the minutes and other documents of the preparatory working group should be published online.
- 305: The preparatory working group should organize local hearings on the law reform.
- 308: When crowdsourcing a law reform using an online platform, the participants should represent all the relevant interests. Crowdsourcing should not be a mere marketing trick but should have a genuine influence on the law.
- 307: When the law reform is done, instruction booklets about the law-reform process and its implications should be written to increase compliance with the new law.
- 302: A preparatory working group consisting of members representing a broad range of stakeholders for the actual law-writing process should be set up for the preparation of the off-road traffic law.

- 306: The preparatory working group should have resources to order investigations on, e.g., environmental issues.
- 303: SYKE experts (SYKE= Finnish Environmental Center) should participate in the preparatory working group to provide information on environmental impacts.
- 301: The law reform should be inspired by the Norwegian law that is generally considered more restrictive than the current Finnish law.



Group

- Regulation of harm to nature, environment, and neighbors.

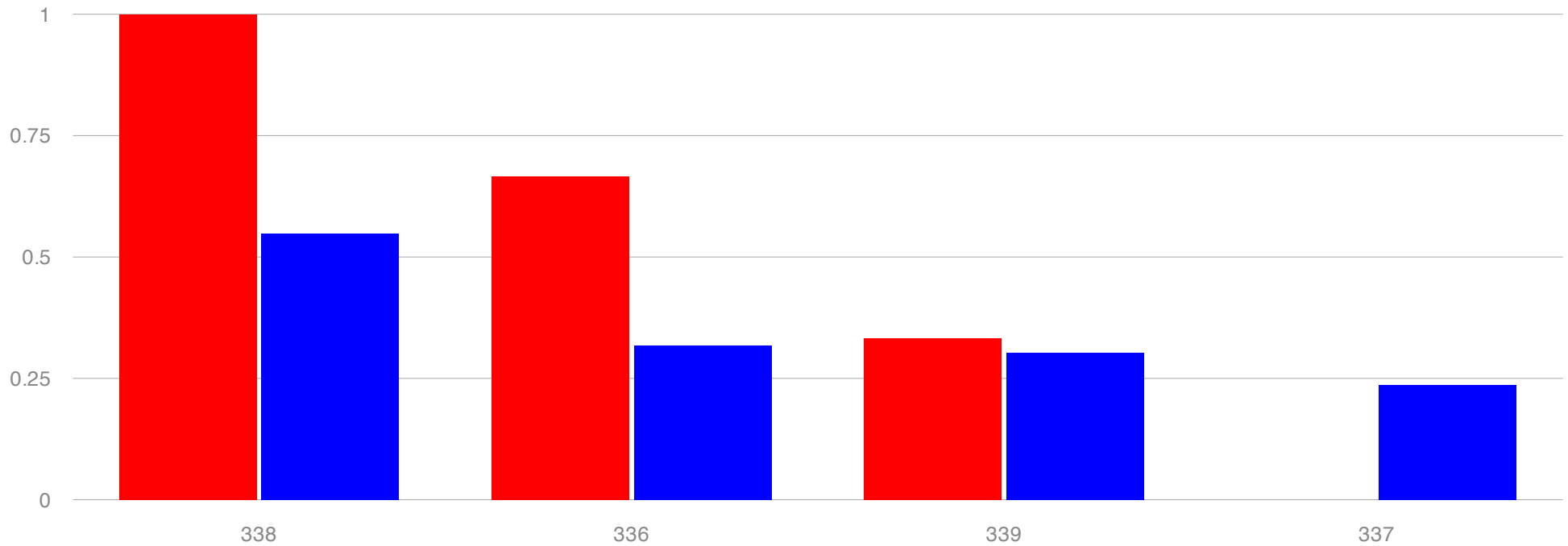
Metric Legend

- Copeland
- Median

Proposals

- 325: If established snowmobile routes are opened for ATV's for summer use, the routes for summer use should be evaluated on a case-by-case basis. This means that each route should be evaluated independently whether it can be used in summer time as well. The impacts of the summer use of the route have to be evaluated separately.

- 330: Routes should go around small water areas and precious environmental and wildlife areas.
 - 355: There should be more education of the younger generation about environmental ethics, so that they learn to respect nature more.
 - 316: In order to reduce noise, off-road traffic routes should be far enough from residential areas.
 - 324: The law should have sufficient criteria for preventing, mitigating and compensating harm.
 - 328: No-go areas (no-go areas refer to areas in which off-road traffic is banned) should be established to protect nature.
 - 329: No-go areas (no-go areas refer to areas in which off-road traffic is banned) should be established and their size should be based on the distance to endangered species, eagle nests, and such and listed in the guidelines of the authorities.
 - 320: When making noise level evaluations for route plans, noise levels of other ongoing projects, such as building projects and the joint effects of the routes and projects on quiet areas, other recreational activities and animals should be taken into account.
 - 319: Proper noise level evaluations and predictions should be included in the route plans and applications.
 - 323: A better or a more specific criterion than “considerable harm” should be defined in the law to refer to the harm off-road traffic causes to the natural environment.
 - 309: Vehicles should have a speed limit of 30 km/h near residential areas.
 - 314: The off-road traffic law should include restrictions for off-road traffic noise pollution limits.
 - 315: There shouldn’t be any regulation in the off-road traffic law regarding noise pollution levels.
 - 353: According to the "Swedish model," riding of snowmobiles with at least 50 cm wide and/or 390 cm long trail chain/rollers is allowed. Minimum length for a narrow roller/trail chain should be 4 meters.
 - 326: The Ministry of Environment should conduct comparative research on other countries’ restrictions in order to establish relevant limits for gasoline emissions in Finland.
 - 311: Routes should be established with a minimum distance to residential areas. The more traffic there is on a route, the greater the distance should be between the route and residential areas. The minimum distance should be 1 km.
 - 318: The term in the current law “considerable harm” should be replaced with a stricter term, for instance one like "greater than little harm".
 - 312: No off-road routes should be allowed closer than 1 kilometer from quiet areas or recreation areas marked in urban planning zones.
 - 322: Routes should be narrower than 6 meters. This would keep noise levels down as narrower routes don’t allow fast and noisy riding.
 - 313: Noise limits for off-road traffic should be more restrictive than for regular traffic.
 - 332: Community organizations and nature conservation organizations should have the right to apply for restrictions to off-road traffic in some areas.
 - 317: In order to reduce noise, there should be payment waivers for light snowmobiles with small motors that travel at a lower speed.
 - 327: The law should include restrictions for off-road traffic emission pollution.
 - 321: Snowmobiles and ATV’s should be taxed according to their noise level and gas emissions.
 - 331: Vast forest areas should be kept free of human activities and reserved for wildlife only.
 - 354: Illegal hunting by using off-road vehicles should be decreased by requiring the installation of a GPS tracking system in off-road vehicles.
 - 310: Snowmobiles should be powered by electricity. This would decrease the noise level.
-



Group

- Off-road traffic law and other laws.

Metric Legend

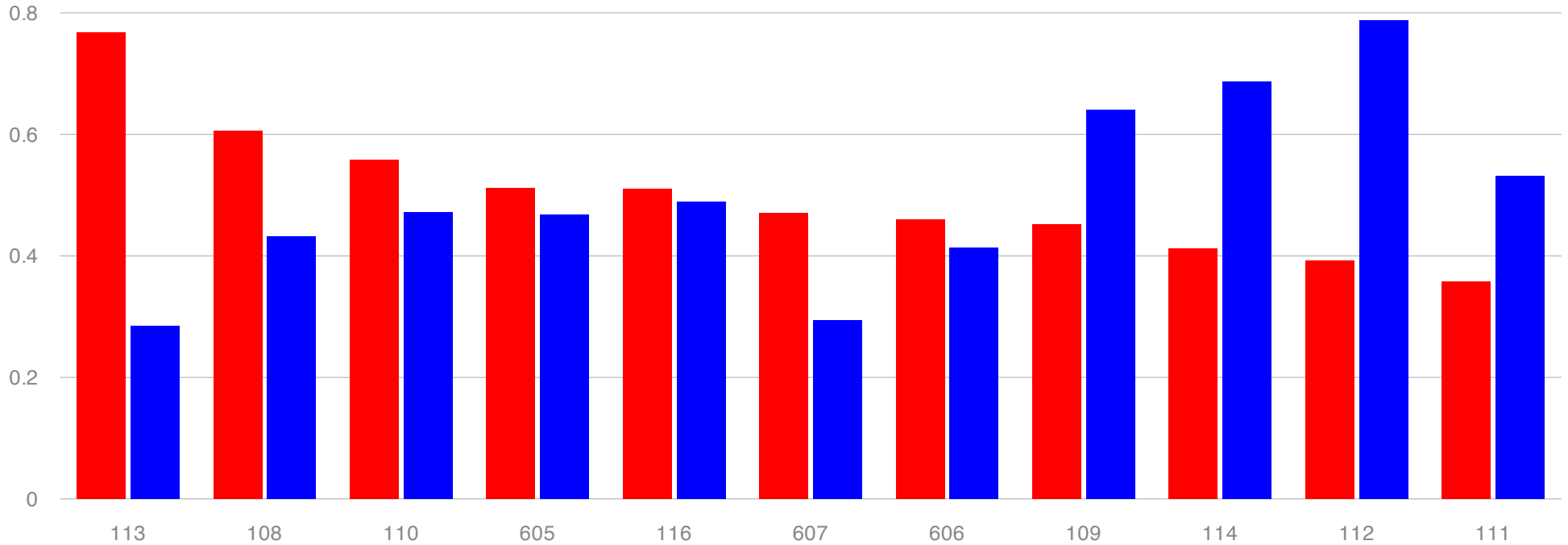
- Copeland
- Median

Proposals

- 338: Vehicles used in forestry or other business-related activities should be left outside of the off-road traffic legislation.
- 336: Off-road traffic should be regulated under the general Road Traffic Act (267/1981) instead of a specific law. Some issues could be regulated under some other appropriate laws, such as the Vehicles Act (1090/2002)
- 339: Snowmobile riding for leisure should be permitted only on routes and it should be regulated under the general Road Traffic Act (267/1981). Snowmobile riding for other purposes than leisure, such as for professional use like reindeer husbandry and professional fishery, should remain permitted also off the routes.
- 337: Permits for off-road traffic competitions and practicing for competitions should be transferred to the Nature Conservation Act (1096/1996). Currently there is too much room for interpretation and too much decision power at the level of individual municipalities.

Finnish off-road traffic proposal aggregation: Minority cluster comparison (Borda)

The following charts give a comparison of how different groups of users rated the proposals. Each chart represents one topic and each proposal has a set of bars representing how different groups of users scored the proposal.



Topic

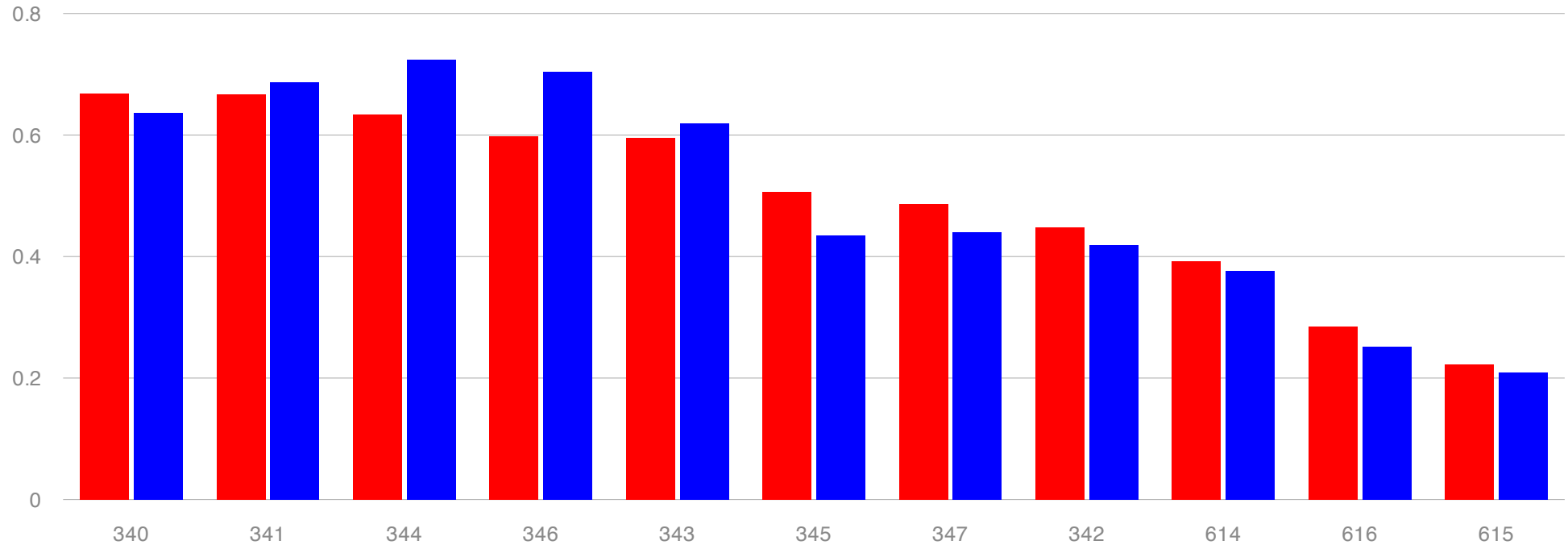
- What are the most important issues in off-road traffic law? Please organize the issue areas by grabbing a block with your mouse and dragging the blocks into your preferred order so that the most preferred one is up and the least preferred one is down.

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 113: Increasing the possibilities to ride off-road traffic vehicles in Finland.
- 108: Improving safety in off-road traffic.
- 110: Regulating about route setting practices.
- 605: Off-road traffic law and other laws. Regulation off-road traffic in other laws
- 116: Enabling the professional use of off-road traffic, such as in reindeer husbandry and fishing.
- 607: Developing the preparatory process of off-road traffic law process.
- 606: Regulating about snowmobile route impact evaluations.
- 109: Decreasing illegal riding in off-road traffic.
- 114: Decreasing the harm of off-road traffic to natural environment and to neighbors.
- 112: Landowners' rights to restrict and prevent off-road traffic on their land.
- 111: Financial compensation to landowners for off-road traffic on their land.



Topic

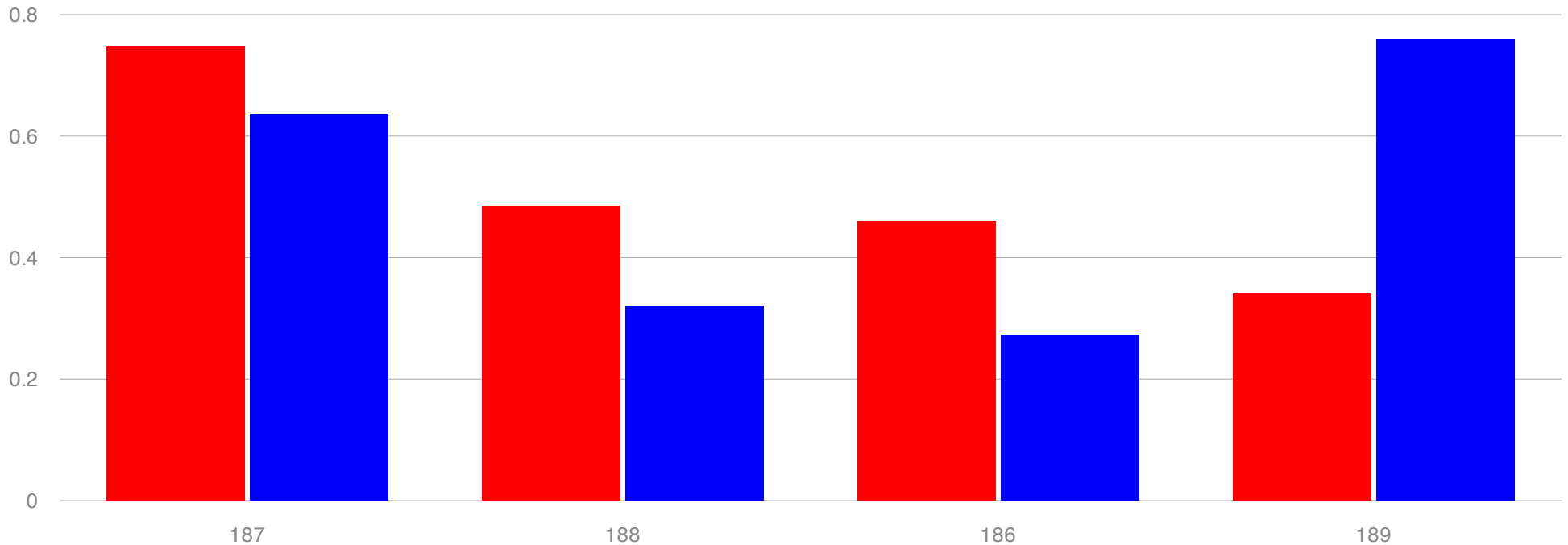
- What do you think the other participants in this evaluation consider the most important issues in off-road traffic law? Basically, what are the other people's preferences? Please rank the following issues according to preferences of the general public/other participants. You can organize the issue areas by grabbing a block with your mouse and dragging the blocks into your preferred order so that the most preferred one is up and the least preferred one is down.

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 340: Improving safety in off-road traffic.
- 341: Decreasing illegal off-road traffic.
- 344: Landowners' rights to restrict and prevent off-road traffic on their land.
- 346: Regulating the harm of off-road traffic to natural environment and to neighbors
- 343: Financial compensation to landowners for off-road traffic on their land.
- 345: Increasing the possibilities to ride off-road traffic vehicles in Finland.
- 347: Enabling the professional use of off-road traffic, such as in reindeer husbandry and fishing
- 342: Regulating snowmobile route and trail setting practices.
- 614: Developing the preparatory process of off-road traffic law process
- 616: Regulating about route impact evaluations
- 615: Off-road traffic law and other laws. Regulating off-road traffic in other laws.



Topic

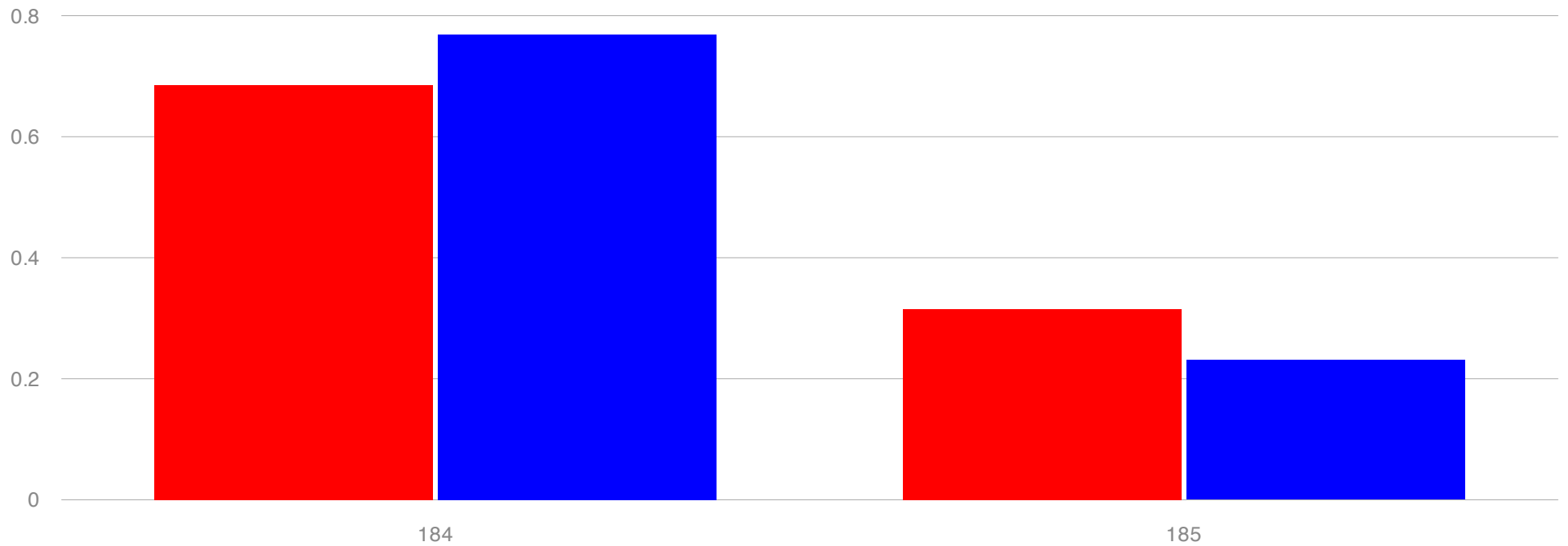
- **Choice of the responsible authorities for deciding on new routes, gathering information on off-road traffic, and deciding on appeals for change.** What would be the best way to organize the complaint process about off-road traffic law?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 187: Complaint procedures concerning routes should be more explicitly included in the off-road traffic law.
 - 188: All complaints about issues related to off-road traffic law should be processed by the same administrative court (in the city of Vaasa in Finland), which already deals with environmental and water permit complaints.
 - 186: Complaints concerning off-road traffic law, such as establishing new routes, should be more often responded to by administrative courts.
 - 189: The right to complain about routes for off-road traffic should be extended to include more stakeholders, such as landowners, practitioners, guardians of the common good and environmental organisations. The Ministry of the Environment, ELY centres (Centre for Economic Development, Transport and the Environment) and Metsähallitus' nature services should also have the right to complain.
-



Topic

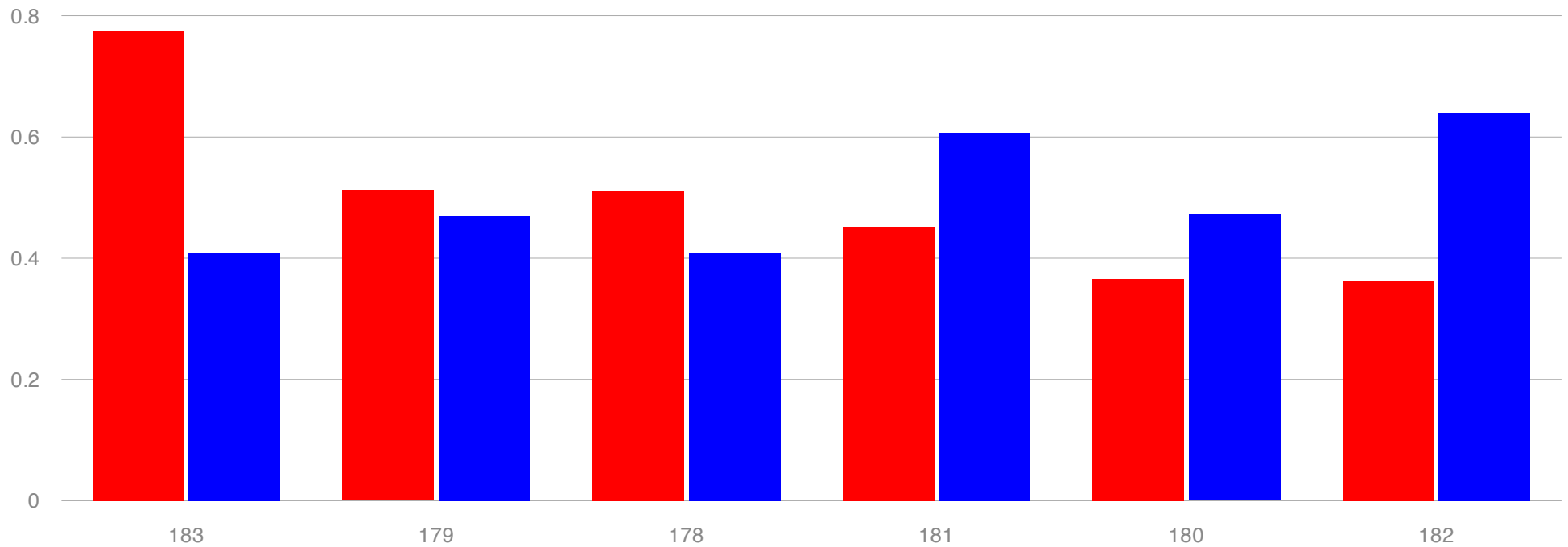
- **Choice of the responsible authorities for deciding on new routes, gathering information on off-road traffic, and deciding on appeals for change.** What would be the right authority to bear the responsibility for information gathering when new routes are consider?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 184: If the municipalities remain the authority responsible for approving new routes, they should be obliged to gather basic information on off-road traffic and to monitor off-road traffic.
- 185: If the ELY centres will be responsible for making decisions on off-road traffic, then they should be in charge of gathering information on off-road traffic.



Topic

- **Choice of the responsible authorities for deciding on new routes, gathering information on off-road traffic, and deciding on appeals for change.** What would be the right authority to decide about routes?

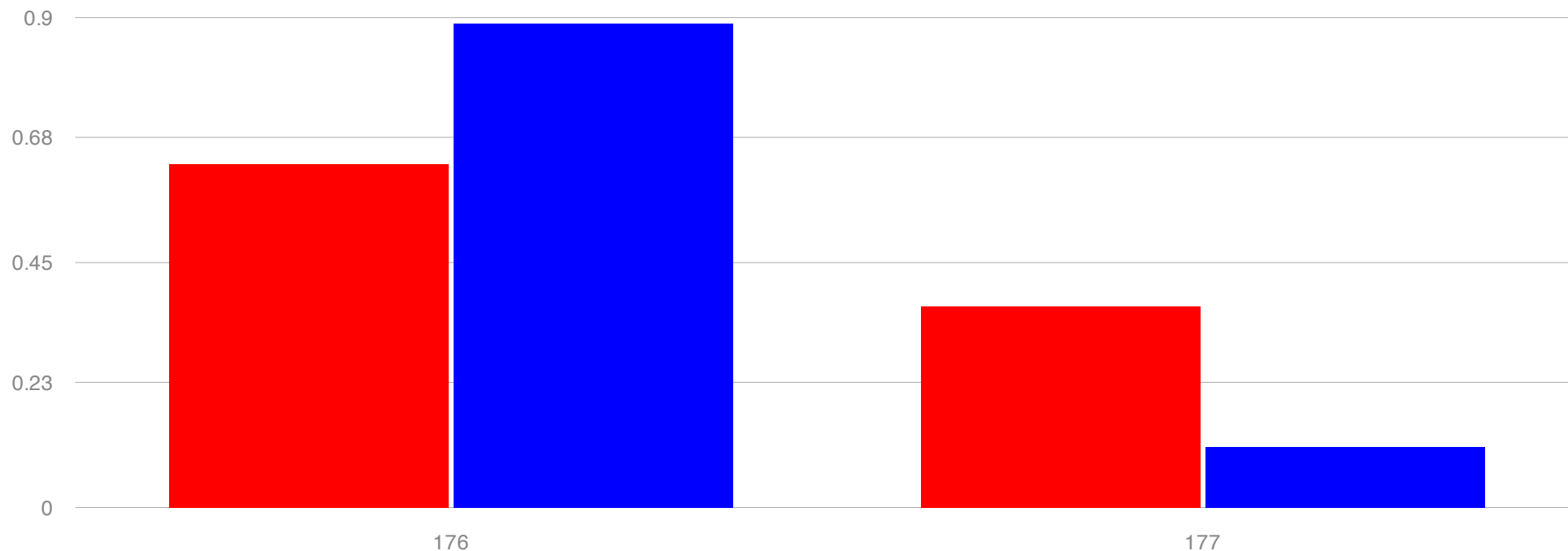
Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 183: Decision-makers of new routes should vary depending on whether the route is a small local connection or part of the national network. The local authority (municipality) would decide on local routes and a county or a national authority about wider route networks.
- 179: Decisions on establishing new routes should be made by an environmental panel in a municipality.
- 178: The municipal officials should remain the responsible authority to decide on establishing new routes.
- 181: The establishment of new routes should not be decided upon by a public authority but through private agreement between snowmobilers and landowners, and possibly via snowmobile clubs.
- 180: The ELY centres (Centre for Economic Development, Transport and the Environment) should be the responsible authority to decide on establishing new routes.

- 182: 'No-go areas' for off-road traffic should be decided upon either by the Ministry of the Environment or the Finnish Environment Institute (SYKE). 'No-go areas' refer to zones in which off-road traffic is banned.



Topic

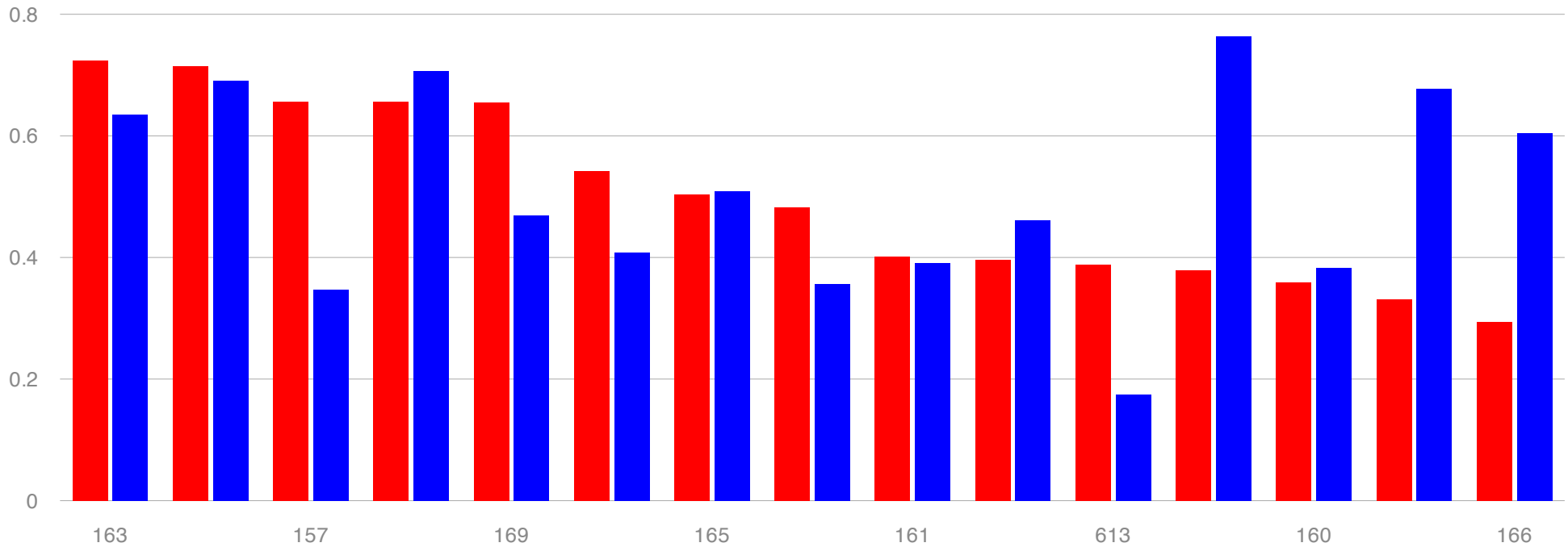
- **Establishing new routes.** How would the reconstruction of routes and trails be organized the best?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 176: Reconstruction of the natural environment (returning the natural environment to what it was like before a route was established) should be organized so that the route administrator is responsible for any harm and repairs necessary due to the route.
- 177: Reconstruction of the natural environment (returning the natural environment to what it was like before a route was established) should be organized so that the route users are responsible for any harm and repairs necessary due to the route.



Topic

- **Establishing new routes.** What would be the best way to determine the time frame of route permits?

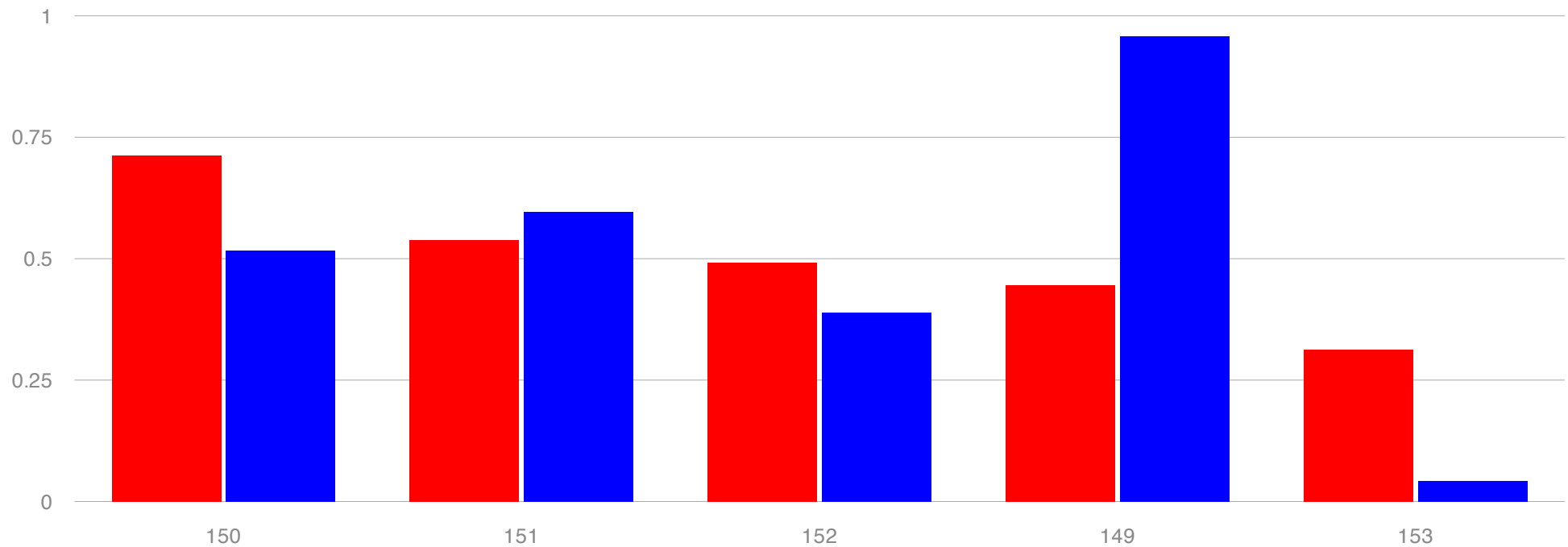
Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 163: The route plan should include a description of use and the landowner should have a right to demand an update to the route plan to correspond to the present situation or closing of the route.
- 156: Route permits should be granted for fixed terms, i.e. the fulfillment of the permit criteria should be checked after the end of each term.
- 157: Route permits should be granted for an unlimited time, i.e. the fulfillment of the permit criteria shouldn't be checked on a regular basis.rkastaa säännöllisesti.
- 162: If the route does not follow the description of use that was approved in the planning phase, the landowner should have a right to demand updating the route plan to correspond to the present situation and closing of the route.
- 169: The validity of the permit criteria for a route should be regularly verified to check if they still make sense and if the route still fulfills the criteria.

- 159: If a route permit has been granted but the route is not created, the route permit should be annulled if the landowner requests it.
- 165: If the effects of a route are higher than estimated in the planning phase, the route should be temporarily discontinued.
- 168: Route permits should be granted for fixed terms and if no renewal application is submitted, the route expires. The land monitoring agency would have a register of all routes and notify the permit holder when the route permit is about to expire.
- 161: If a route permit has been granted but the feasibility of the route plan is not inspected on a yearly basis, the route permit should be annulled at the landowner's request.
- 158: If a route permit has been granted but the route is not created, the route permit should be automatically annulled.
- 613: Permits for off-road traffic competitions and trainings should have to be renewed yearly
- 167: Regardless of whether or not route permits are granted for fixed terms or an unlimited time, the landowner should have the right to continue or discontinue the agreement on which the permit is based.
- 160: If a route permit has been granted but the feasibility of the route plan is not inspected on a yearly basis, the route permit should be automatically annulled.
- 164: If a route is misused, the landowner should have the right to close the route without advance notice.
- 166: The landowner should have a right to close a route with a 6-months advance notice.



Topic

- **Establishing new routes.** What would be the best way to regulate about establishing a route on landowners' property even if the landowner is

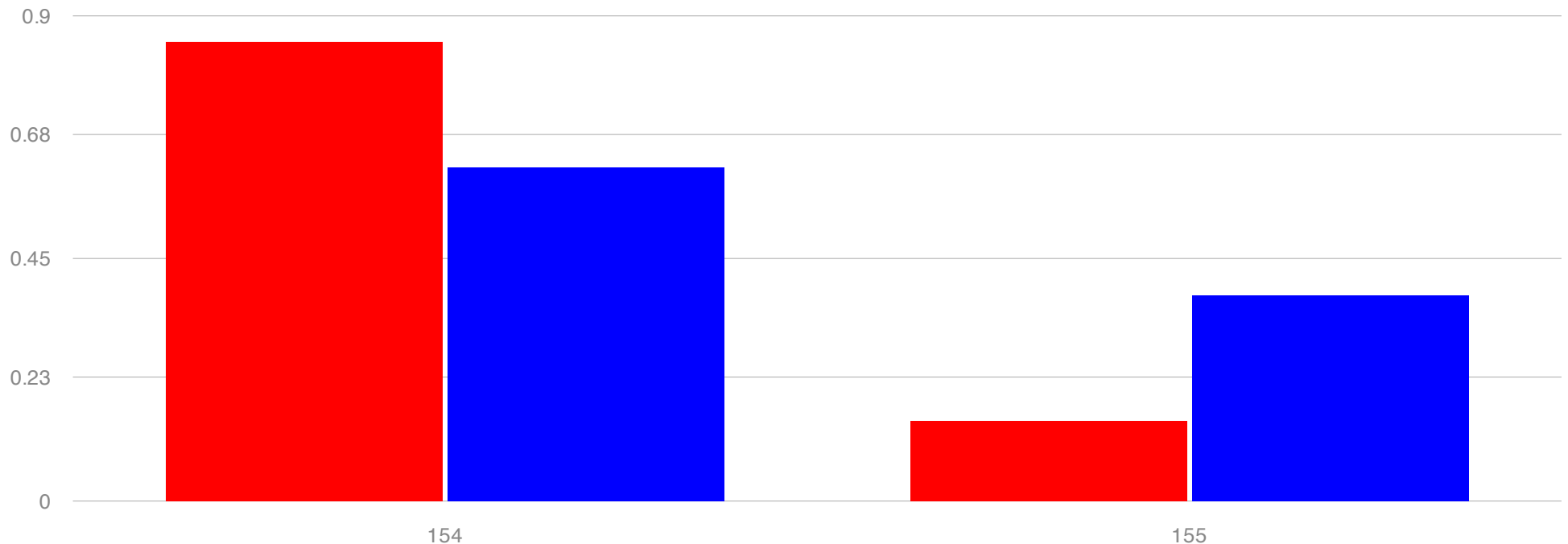
resisting the route?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 150: It should be possible to establish a route on private property without the landowner's consent but only when this does not cause harm to the landowner.
- 151: It should be possible to establish a route on private property, but the need for a route should be justified by more important reasons than improving the public traffic network or common recreational use.
- 152: There should be more strict and clear criteria in the existing law for justifying bypassing landowners' consent when establishing a new route.
- 149: It should not be possible to establish a route on private property without the landowner's consent. Landowners should have an ultimate right to control their own property.
- 153: It should be possible to establish a route on private property without the landowner's consent whenever there's a need to set up a route.



Topic

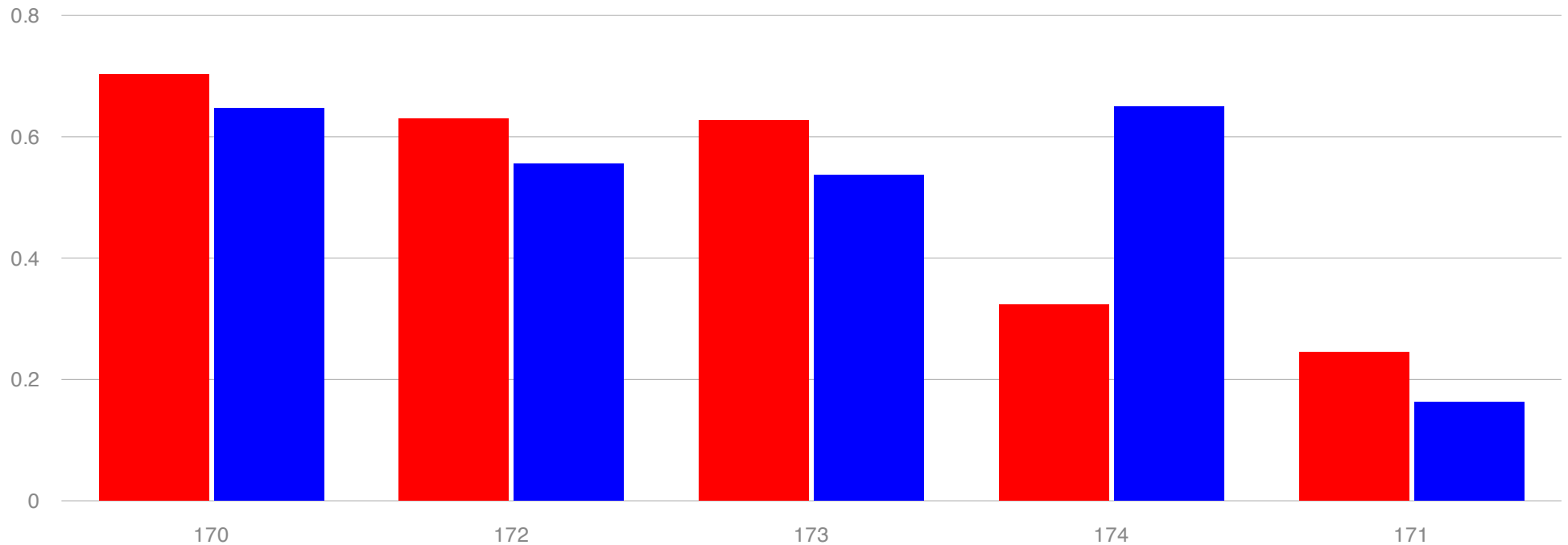
- **Establishing new routes.** Which authority should have the right to prevent or allow routes?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 154: The Finnish Forest and Park Service should be granted a veto right (right to prevent a route or trail on their lands) concerning routes or trails in preservation areas that it governs.
- 155: The state or any other public institution should not be obliged to accept routes on their land. They should be granted a veto right regarding planned routes on their land.



Topic

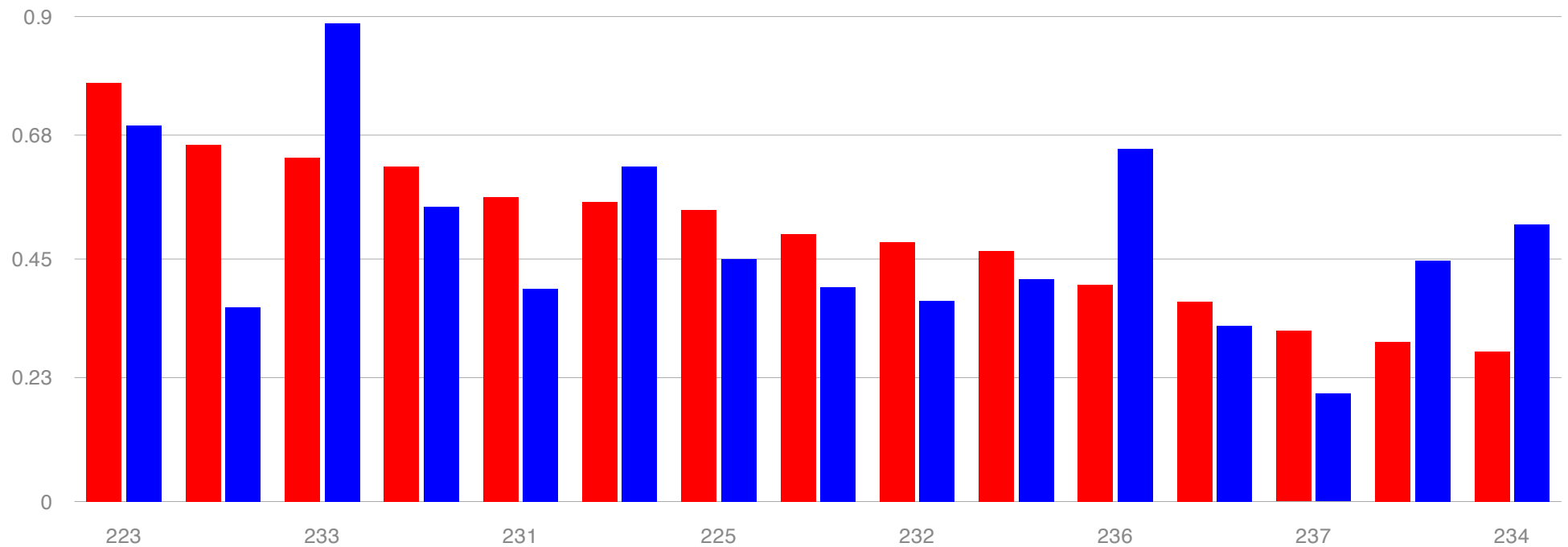
- **Establishing new routes.** How would the maintenance of routes and trails be the best organized?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 170: Route and trail maintenance should be organised so that a usage fee for riding on routes and trails inside a municipality is collected. The income from the fee should be used to maintain and develop routes and trails.
- 172: Route and trail maintenance responsibilities should be defined in the route planning phase.
- 173: Route and trail maintenance should be organised so that at least in southern Finland snowmobile riding clubs and the municipalities co-operate in order to lower maintenance costs.
- 174: Route and trail maintenance should be organised so that the planning, maintaining and building of off-road traffic routes are paid for by the snowmobile associations.
- 171: Route and trail maintenance should be organised so that the law defines whose responsibility it is to take care of thicket growing on routesides.



Topic

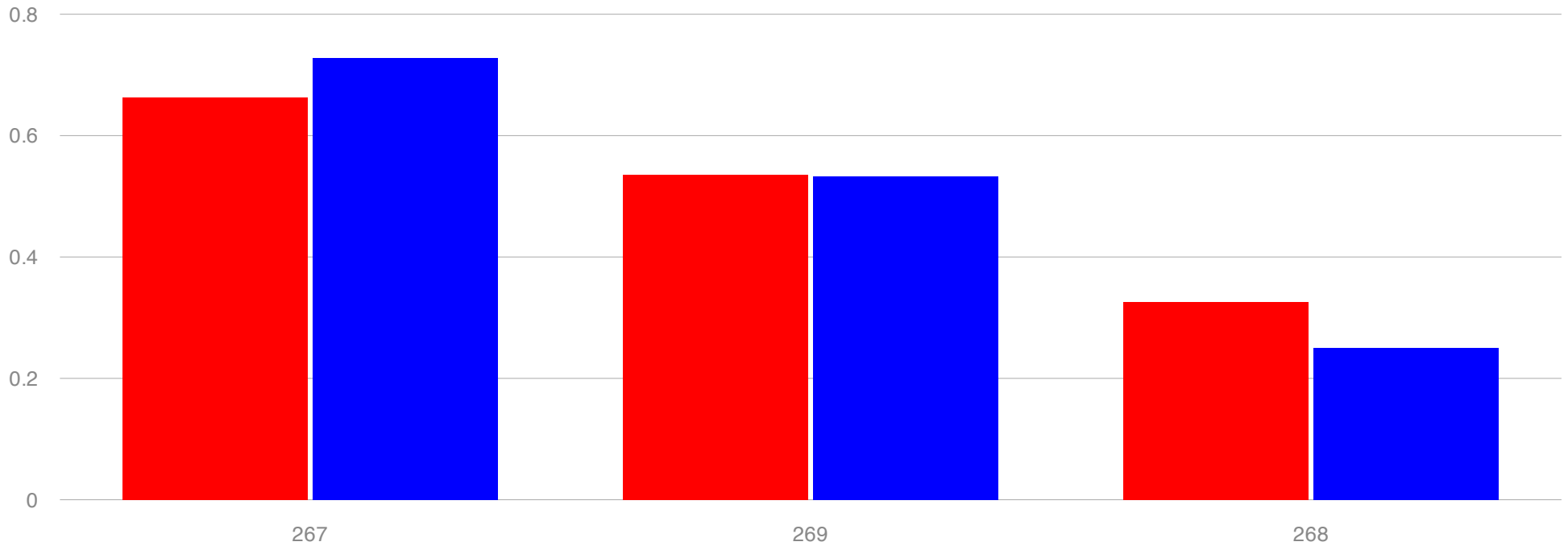
- **Financial compensation for landowners.** What would be the best way to compensate the landowner for the use of his land to off-road traffic?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 223: Multiple factors, such as land quality, agriculture, farming and forestry, should be taken into account in order to fairly calculate the amount of compensation owed to landowners.
 - 229: Financial compensation should be given to private landowners, but the use of existing state-owned routes should remain free of charge.
 - 233: Proper financial compensation for landowners should be paid and routes should be based on voluntary usage agreements.
 - 224: The amount of compensation for landowners should be calculated separately for summer and for winter periods.
 - 231: Temporary route usage permits to non-members of the local clubs should be granted; payments would be supervised in the same way as an automobile tax, for instance.
 - 235: The amount of financial compensation for landowners can be calculated by taking into account the estimated profit from the land (from agriculture or forestry). Compensation for agricultural land should be four times bigger than for forests.
 - 225: Local forestry associations should be consulted when negotiating a compensation amount.
 - 230: The financial compensation for landowners should be organized so that drivers pay for the route maintenance and are given a sticker to prove their payments.
 - 232: The financial compensation for landowners should take into account that snowmobile riders can ride along existing powerlines and other already existing paths, which are suitable for snowmobile riding. The sum plus interest should be given to the landowner at the end of the year.
 - 226: The amount of compensation to landowners should be organized so that a usage fee (including a recurring payment like a rent and compensation for possible damages) is collected from drivers in the beginning of the year and the sum plus interest is given to the landowner at the end of the year.
 - 236: The amount of financial compensation for the landowner should be paid for all routes and trails and agreed upon by the snowmobile club and the landowner. If no agreement on the amount can be reached, no route can be established.
 - 228: The amount of compensation for landowners should be the same as in the Swedish and Norwegian model: 150 euros per snowmobile.
 - 237: Landowners shouldn't be compensated at all if a route or a trail crosses their property.
 - 227: Compensation for landowners should be 1 Euro (\$1,34) per 1 meter (1,09 yards). A snowmobile club would collect the payments from its members and pass them on to landowners. For example, 1 kilometer (0,62 miles) of snowmobile trail would require 1,000 euros (\$1,380) that would be divided by the number of members in a snowmobile club.
 - 234: Financial compensation for landowners should be paid and all costs of routes should be paid by the snowmobile clubs.
-



Topic

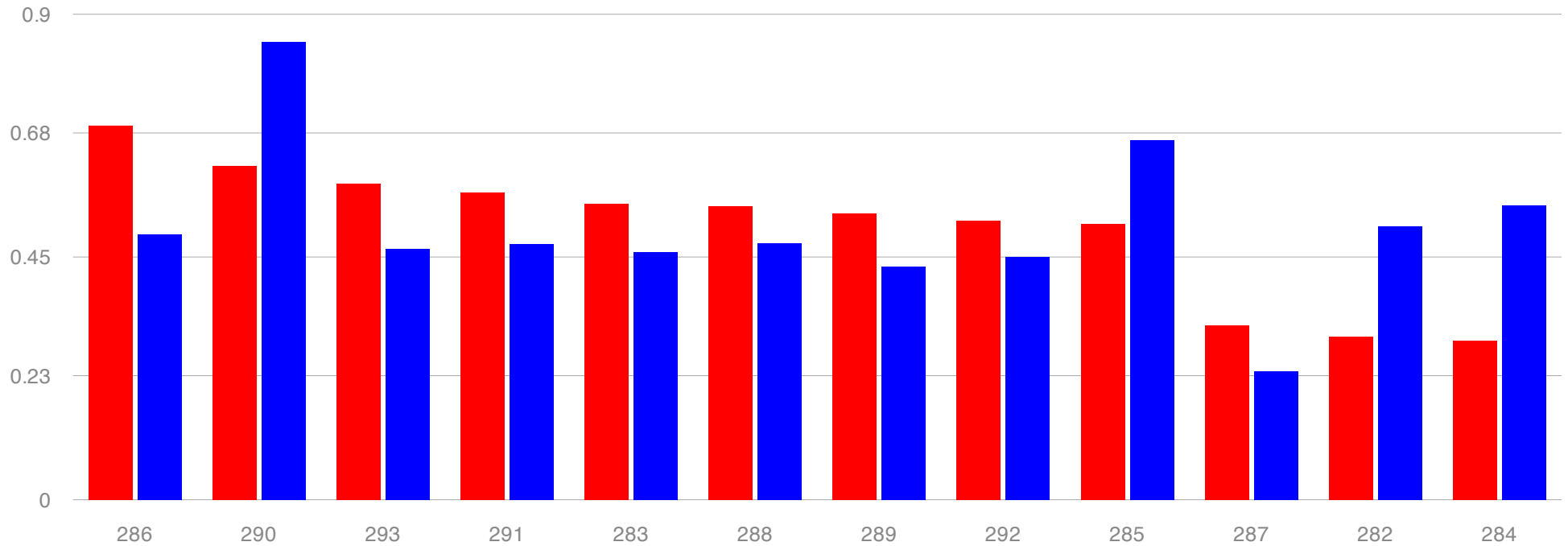
- **Illegal riding.** How to best decrease illegal traffic by allowing more off-route traffic to connect between routes or trails?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 267: Snowmobiles should be allowed to use roads and shoulders for off-route traffic to connect between routes or trails.
 - 269: Transfer to routes via private land using existing trails (power lines, open swamp areas etc.) and roads used by other vehicles should be legalized. The offender should pay for any harm he or she causes. If the offense is grave, offenders could be fined.
 - 268: Off-route traffic from home to routes should be made legal.
-



Topic

- **Illegal riding.** How to best decrease illegal traffic by altering monitoring systems?

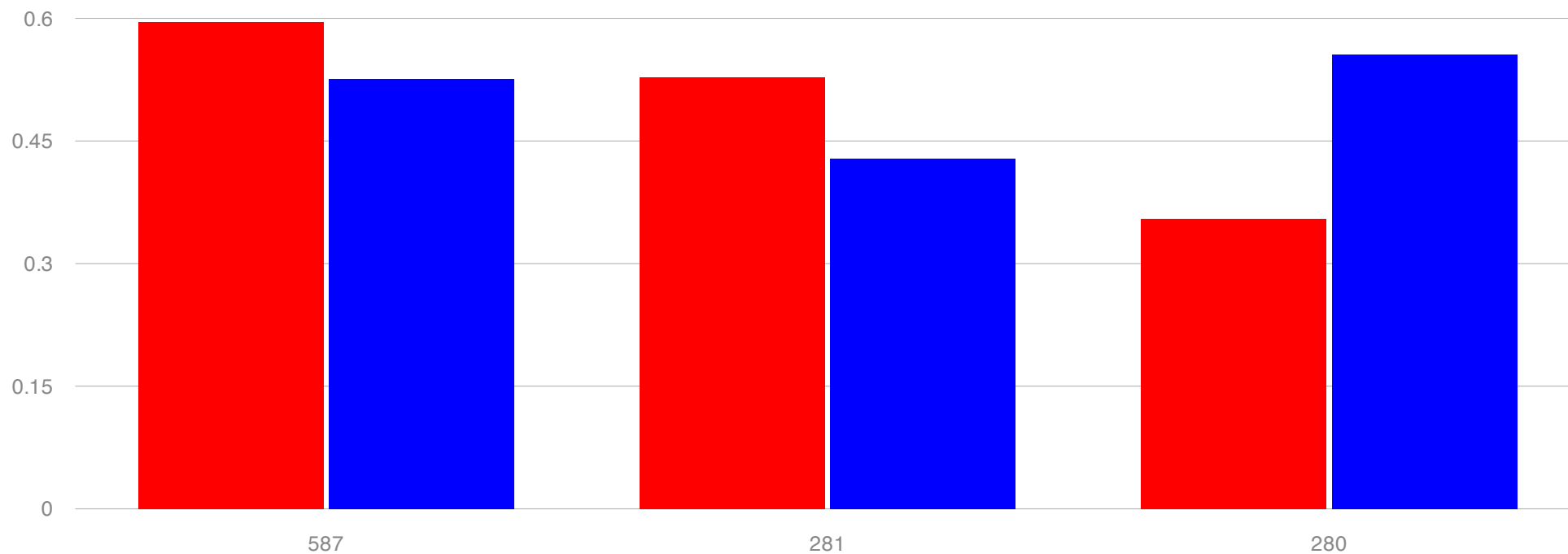
Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 286: License plates should be required for all off-road vehicles in order to track if usage fees have been paid.
- 290: The police should be granted rights to take action against off-road traffic violations.
- 293: A personal driving permit should be required from snowmobile owners for a specific area
- 291: Illegal off-road traffic can be decreased by granting monitoring rights to the Border Control.
- 283: RFID stickers should be used to monitor vehicles on snowmobile trails. Stickers should be sold nearby the trails on easily accessible locations such as gas stations.
- 288: A license plate, which would be a sticker glued to the front cover glass of a snowmobile, should be made mandatory.
- 289: Land-owners should be granted monitoring rights to monitor off-road traffic on their land.
- 292: Forest rangers should be granted monitoring rights to off-road traffic.

- 285: More police force should be deployed to monitor off-road traffic.
- 287: Distance tracking (RFID, GPS) of all off-road vehicles should be used to monitor if usage fees for trails have been paid.
- 282: GPS-tracking of vehicles should be used to monitor traffic and identify illegal riders.
- 284: Snowmobiles should be required to have an individual chain marking to enable tracking illegal riding. The 'chain marking' is a unique trace that a snowmobile's chain leaves on snow. Thus illegal riders could be identified by identifying their traces.



Topic

- **Illegal riding.** How to best decrease illegal traffic by modifying traffic arrangements?

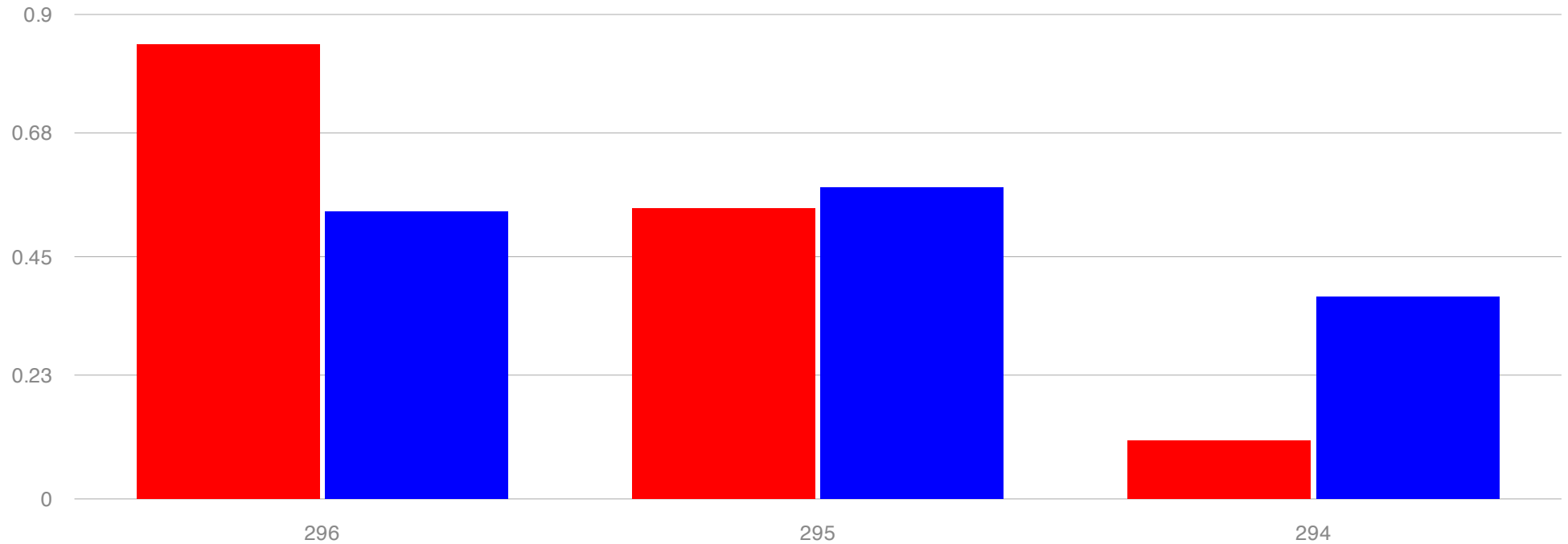
Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 587: Going around obstacles on a route should be allowed even if there is no existing route or trail to do so. The current law states that obstacles must be passed via existing routes. This forces riders to make long detours, causing delays and extra kilometers.

- 281: There should be more clear signs on off-road traffic routes to indicate free-riding zones and no-go areas. Signs could be put in place either by landowners, snowmobile club associations or other authorized entities.
- 280: Parking areas for off-road vehicles should be created near route starting points. At the moment, there is a lack of parking areas near route starting points, and therefore off-road traffic route users have to ride illegally along regular roads to reach routes.



Topic

- **Illegal riding.** How to best decrease illegal traffic by punishment?

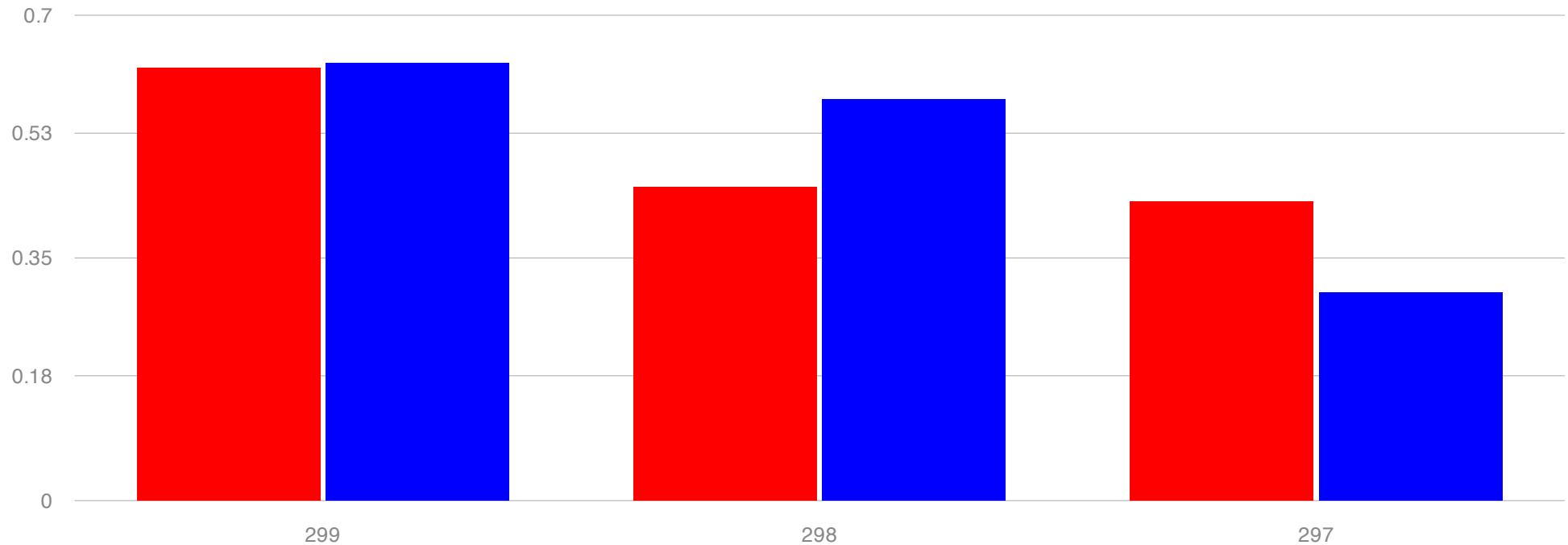
Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 296: Any harm caused should be compensated by the offender and if the offense is grave, they should be fined.
- 295: Fines for offenders should be defined. If someone repeatedly breaks the rules, the state could confiscate their vehicle and/or landowners could ban said rider from their land.

- 294: The equipment of law violators and offenders should be confiscated.



Topic

- **Illegal riding.**How to best decrease illegal traffic by altering registration systems?

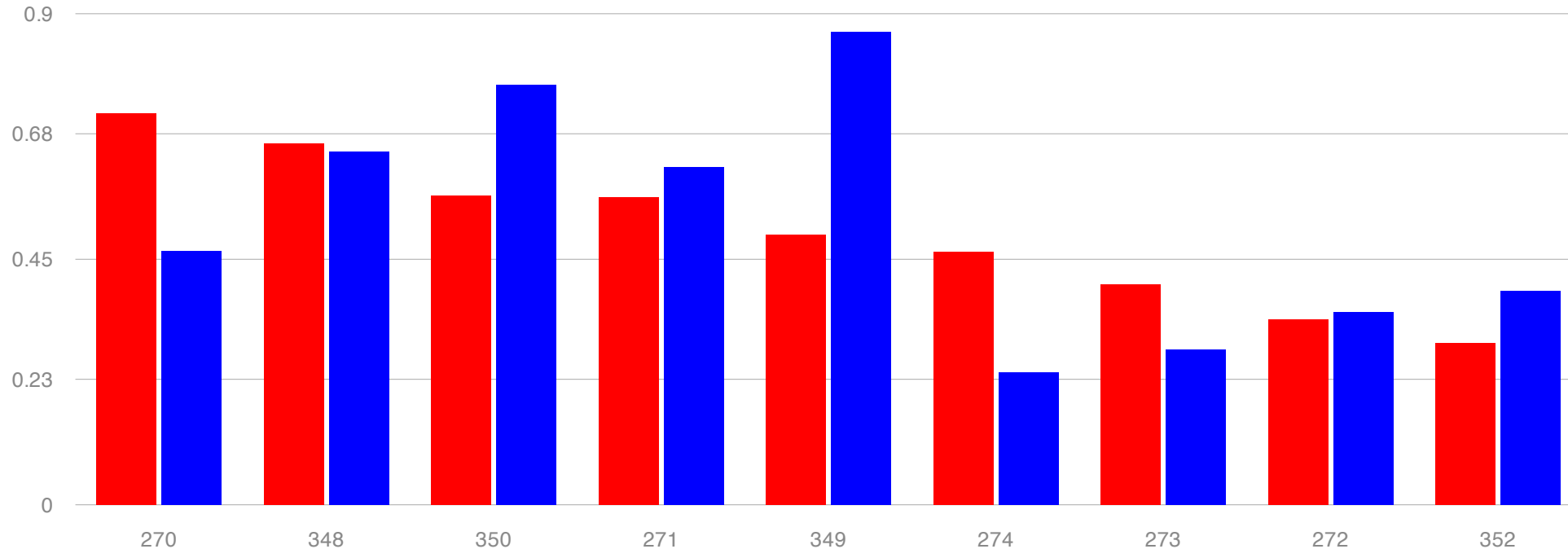
Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 299: Off-road vehicles that are meant for professional use, such as forestry and farming, shouldn't need to be registered. The same applies to off-road vehicles that are used for maintaining cross-country ski trails and such.
- 298: It should be obligatory for all off-road vehicles, also ATV's, to be registered with The Transport Safety Agency (Trafli). Trafli is in charge of vehicle registration and maintains the Vehicle Register in Finland.
- 297: A new registration category for off-road vehicles should be created for the purposes of off-road traffic: all vehicles should be insured and equipped with license plates, no indicator lights would be required, speed limit would be 80 km/h and riding on motorways would not be

allowed.



Topic

- **Illegal riding.**How to best decrease illegal traffic by increasing the possibilities for off-road traffic?

Metric Legend

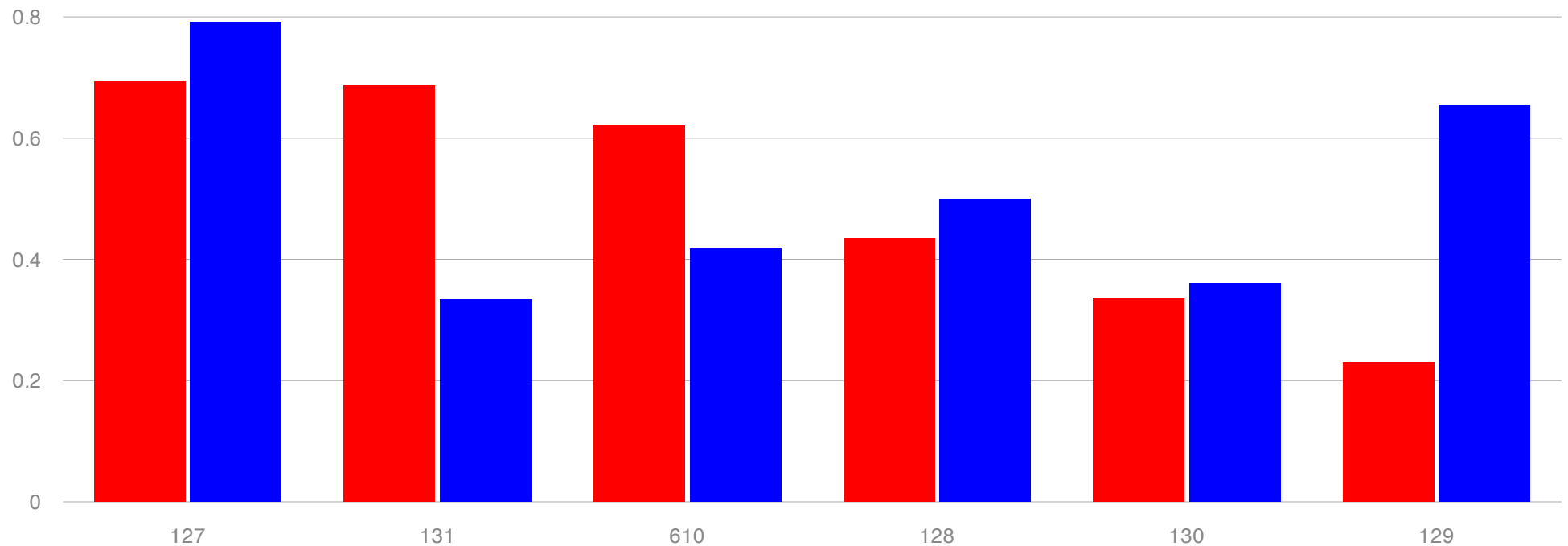
- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 270: 'Free riding areas' like in Sweden should be created for routeless snowmobile riding for everybody.
- 348: More routes for off-road traffic should be established, so that there's less need for illegal riding.
- 350: Landowners should have more flexibility to decide about off-road traffic on their land. They should be able to create free-riding zones and no-go areas on their lands. Landowners should then be given tools to easily designate areas on their land to which they grant snowmobiles access. Clear pointers to indicate free-riding zones and no-go areas should be placed on digital maps. Landowners would only need to indicate to the local authority in which areas they prohibit snowmobile access and that information would be transferred to digital maps. Since there

would be more areas for legal traffic, illegal traffic would decrease.

- 271: Residents in sparsely populated areas of Lapland and Northern Finland should be allowed to ride snowmobiles off routes because in these areas, snowmobiles are used as a means of transportation. In order to use snowmobiles as a means for daily commute, it is claimed that residents in Northern parts of Finland can't stay on routes or trails because there's not enough of these, and also the need for mobility on snowmobiles is constantly changing.
- 349: Landowners should be allowed to ride unregistered vehicles on their own land.
- 274: Free riding (meaning riding anywhere off routes and trails) in Lapland should be allowed except in areas restricted due to farming needs, such as reindeer breeding period.
- 273: Tourists in Lapland should be allowed to buy temporary permits to use 'free riding zones', with which one can ride anywhere and doesn't need to follow routes or trails. These free riding zones don't exist yet, but should be established.
- 272: Free riding (meaning riding anywhere beyond routes and trails) in Lapland should be allowed under the condition that the driver is a permanent resident of one of the counties in Lapland.
- 352: Snowmobile trails should be turned into routes, as it would permit carrying a hunting rifle on a snowmobile.



Topic

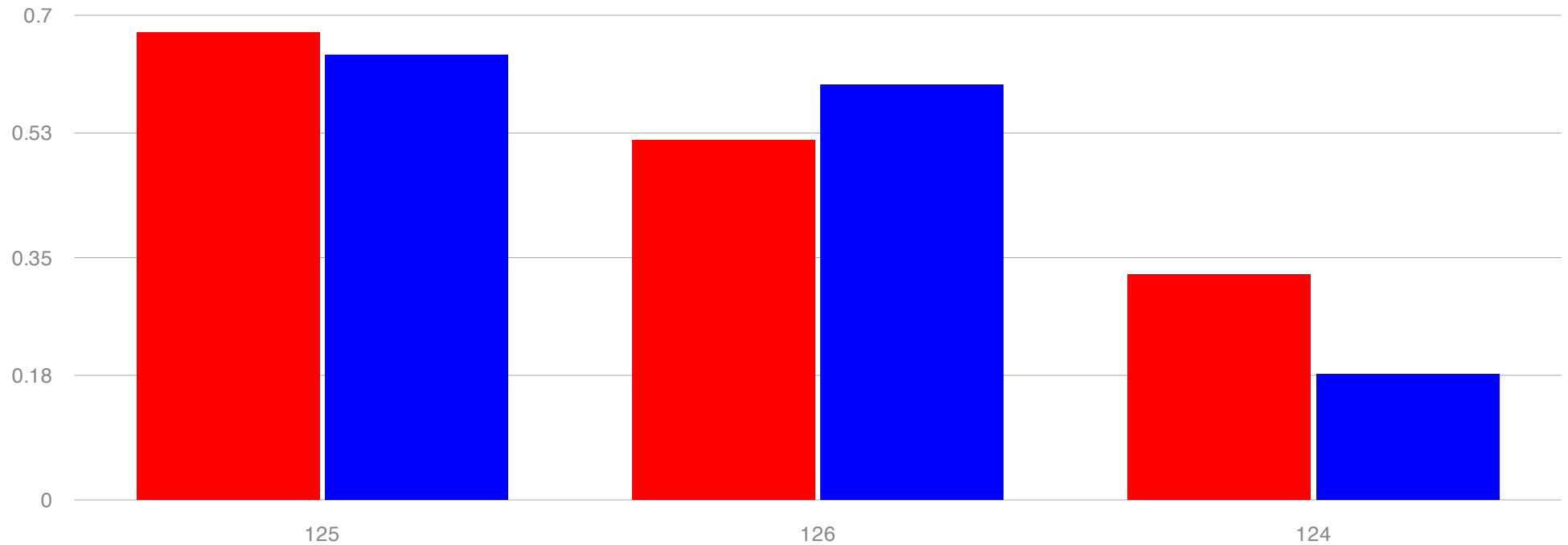
- **Location of routes.** How could the snowmobile routes be situated the best taking buildings and structures into account?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 127: New routes should be established along power grid lines. Trees are typically cut in these areas so they are good places to ride.
- 131: Middle-sized powerlines and large powerlines and the sides of fields for agricultural use should be free to use for off-road traffic.
- 610: The granting of permits for riding along powerlines should be simplified.
- 128: Given that existing powerlines and the sides of fields for agricultural use would be used by off-road traffic, landowners should mark Christmas tree fields so that they do not get destroyed by traffic.
- 130: Short ring routes should be established around hydro-electric power plants. This would help create a nationwide body route network that utilises existing power lines and reservoirs of large rivers.
- 129: The location of routes should be determined based on where noise is already prevalent, such as industrial areas and populated areas.



Topic

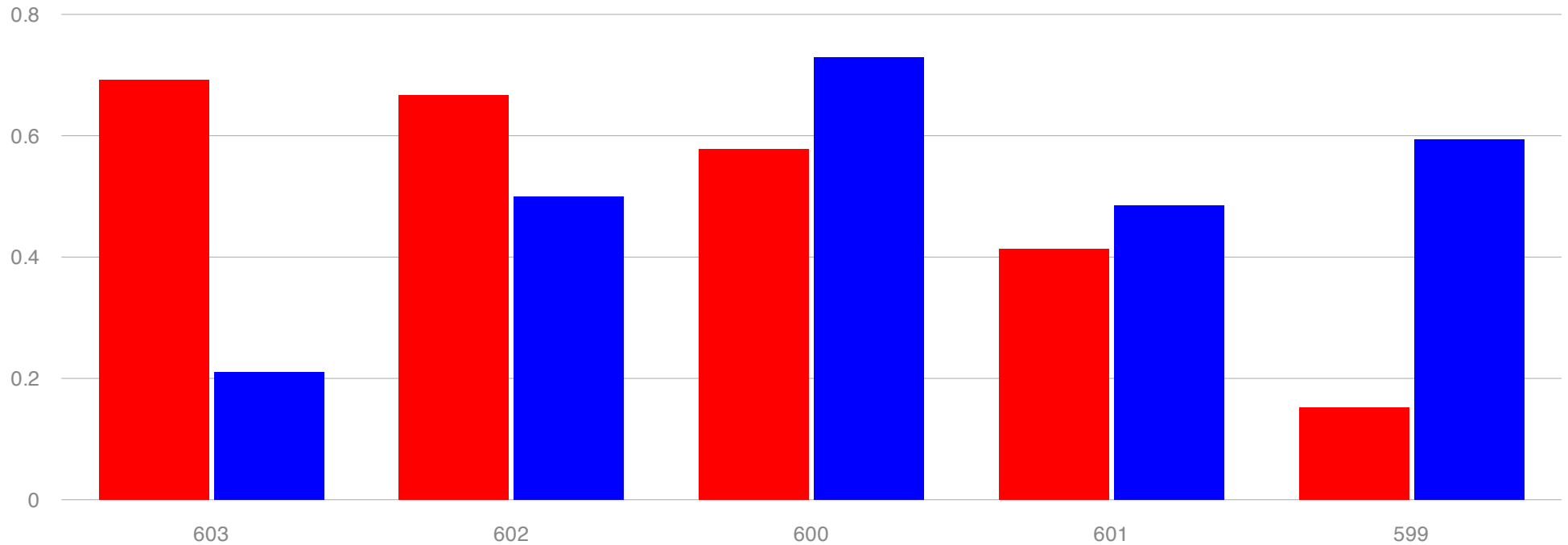
- **Location of routes.** How should the location of routes be determined?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 125: Uusia reittejä koskevan sääntelyn tulisi olla erilaisia reiteille, jotka kulkevat yksityisillä mailla ja reiteille, jotka kulkevat valtion omistamilla mailla.
- 126: Valtion omistamilla mailla kriteerien tulisi olla erilaiset reiteille, jotka kulkevat suojelluilla luontoalueilla ja reiteille, jotka kulkevat tavallisilla luontoalueilla.
- 124: Uusia reittejä koskevan sääntelyn tulisi olla erilaista Pohjois-Suomessa sijaitseville reiteille ja Etelä-Suomessa sijaitseville reiteille.



Topic

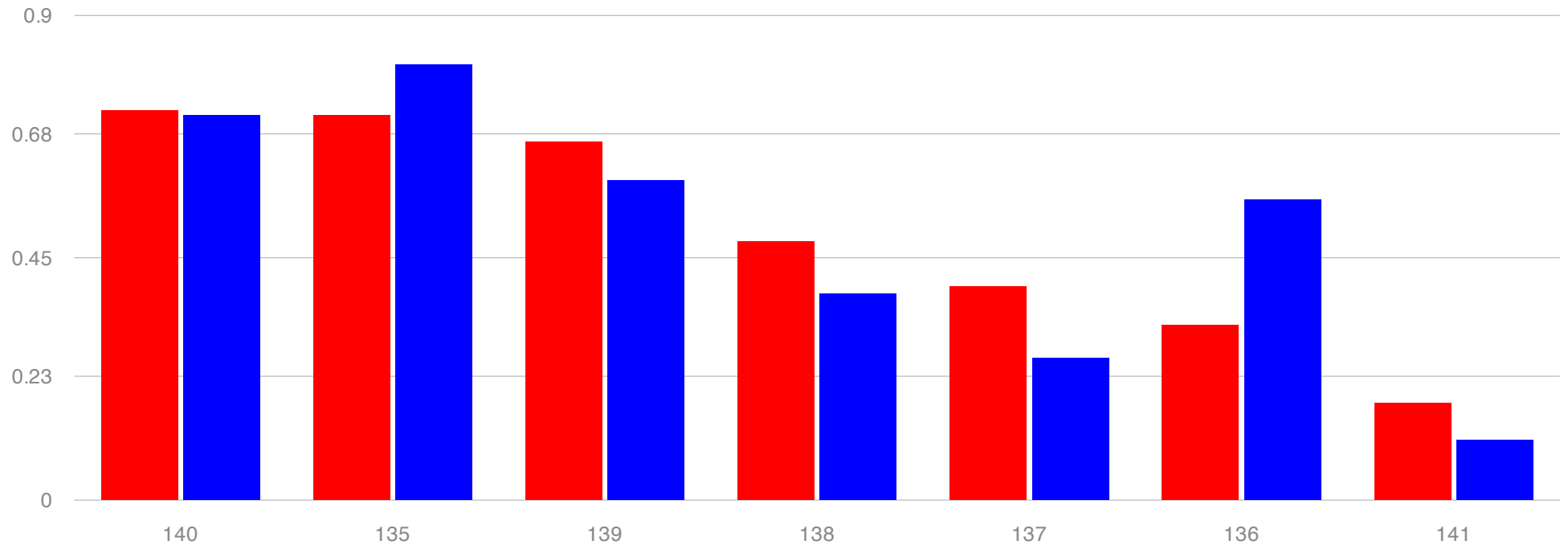
- **Location of routes.** How to best match the purpose and regulation of off-road traffic?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 603: The Swedish model should be followed: there should be more freedom to ride snowmobiles off established routes and trails.
- 602: Professional use of off-road vehicles (snowmobiles and ATV's) like reindeer husbandry and professional fishery should remain permitted off routes and trails.
- 600: Snowmobile riding for leisure should be permitted only on routes and it should be regulated under the general Road Traffic Act (267/1981). Snowmobile riding for other purposes than leisure, such as for professional use like reindeer husbandry and professional fishery, should remain permitted off routes.
- 601: Individuals with special needs should be taken into consideration when setting routes.
- 599: Off-road traffic should be allowed only for professional use, not for leisure.



Topic

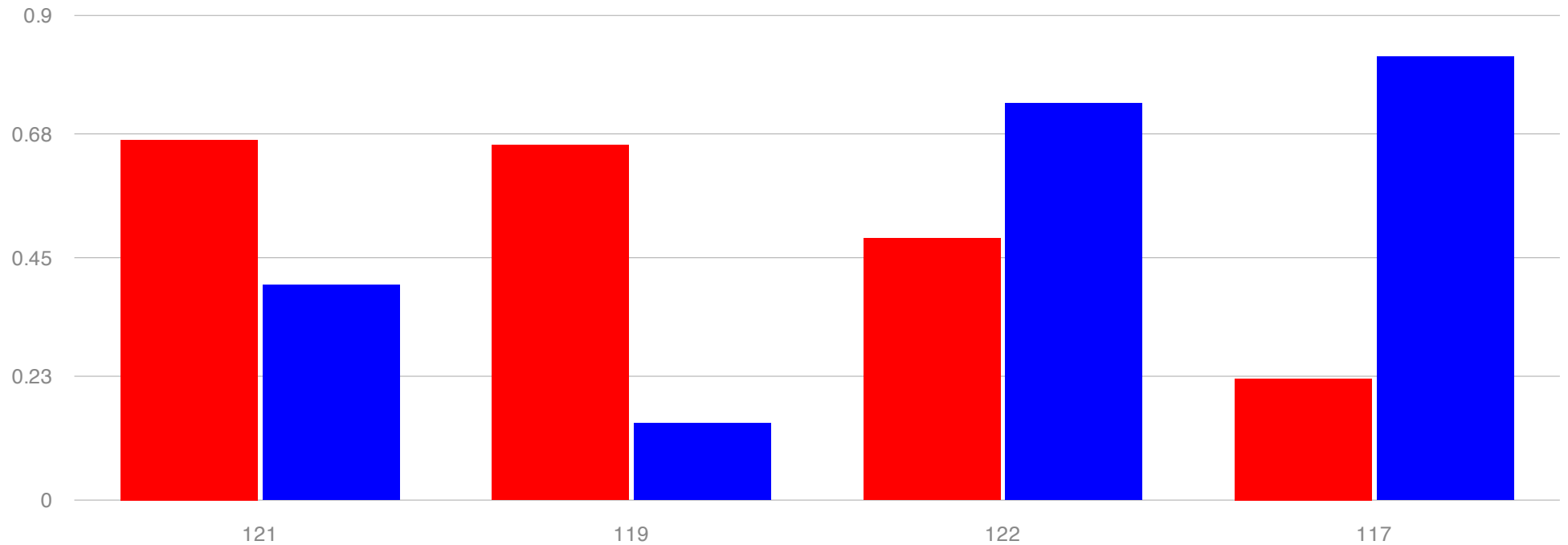
- **Location of routes.** What type of restrictions route locations should have?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 140: When deciding the location of routes, landowners can indicate which areas they don't want to be used.
- 135: Routes should respect a certain minimum distance to gardens, cowsheds and houses.
- 139: When a route is planned, landowners should be encouraged to indicate which areas they don't want to be used on their property.
- 138: "No-go areas" should be established for farming and agriculture purposes. A no-go-area refers to a zone in which off-road traffic is absolutely banned.
- 137: The location of routes has to follow the urban zone planning and should not interfere with zoning plans.
- 136: Untouched nature and wilderness should not be used for off-road traffic.
- 141: If endangered species and other wildlife are discovered when a route or a trail is planned, then a private nature reserve should be created.



Topic

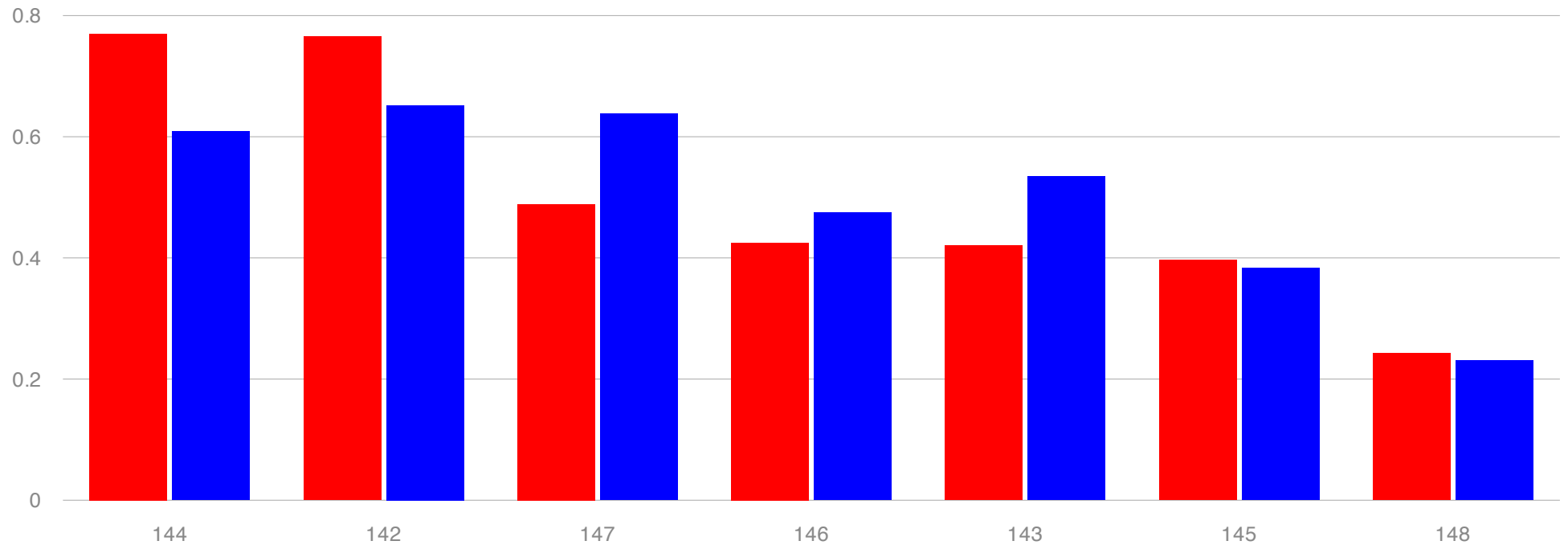
- **Location of routes.** What would be the best way to situate snowmobile routes?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 121: There should be more routes in the Eastern and Northern parts of Finland.
- 119: Undeveloped land beyond residential areas should be made available as free-riding zones.
- 122: Co-operation with Russia should be sought to determine locations of routes at the border.
- 117: There should be no routes on private land but instead all routes should be located on state-owned land.



Topic

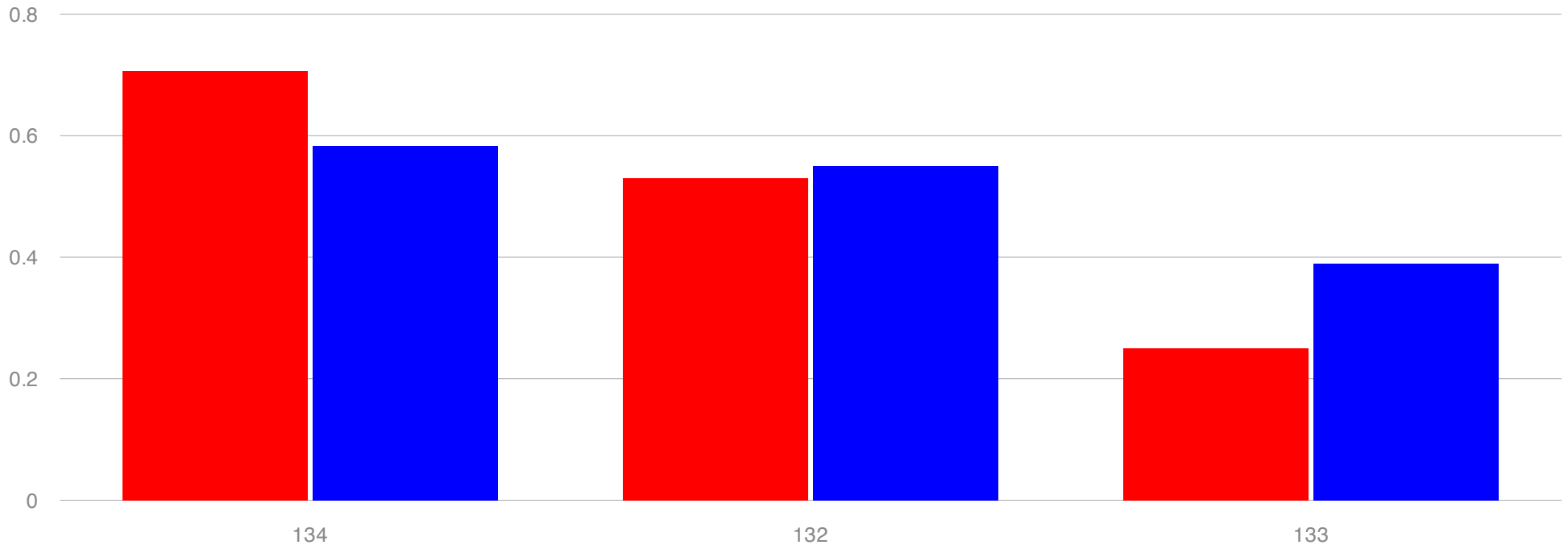
- **Location of routes..** What would be the best way to arrange snowmobile riding in Lapland?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 144: The Swedish model for off-road traffic should be applied at least to Lapland.
- 142: Lapland, the northern part of Finland, should have more areas reserved for free, unrestricted driving than other parts in Finland because there's so much undeveloped land.
- 147: When deciding on off-road traffic regulations for Lapland in particular, a larger number of affected parties should be consulted. These parties include officials of northern municipalities, especially Kittilä, the Finnish Forest and Park Service, and snowmobile clubs.
- 146: Residents in Lapland should have the right to ride freely inside their county. This means they should be allowed to ride off routes and trails.
- 143: Riding off-road vehicles and ATV's to fishing lakes in the northern, sparsely populated areas in Finland should be allowed. Otherwise fishing is impossible.
- 145: Snowmobile riding in large national parks in Lapland should be allowed.
- 148: The off-road traffic law should not give some users (e.g., reindeer owners) special rights because these rights would water down the whole law.



Topic

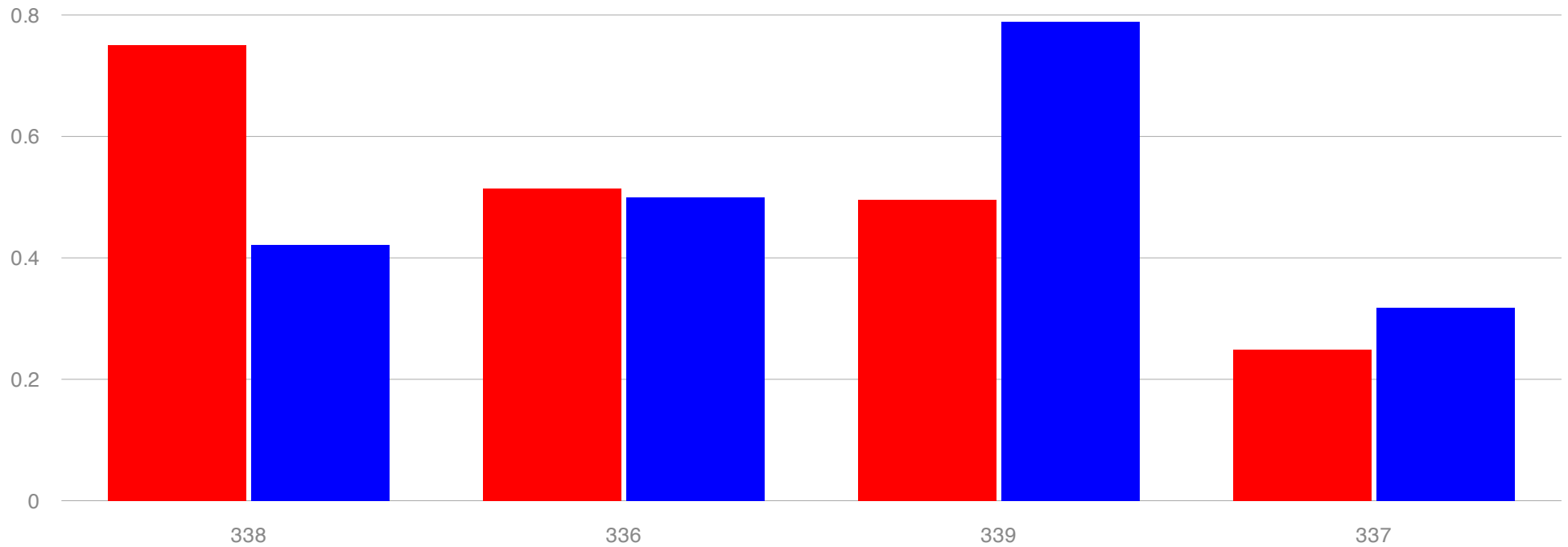
- **Location of routes.**How could the snowmobile routes be situated the best taking traffic patterns into account?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 134: Small roads meant for tractors in the summer should be opened for snowmobiles in the winter.
- 132: New routes should be established based on existing routes even if they are at the moment classified as illegal.
- 133: The location of routes should be determined based on GPS-acquired data.



Topic

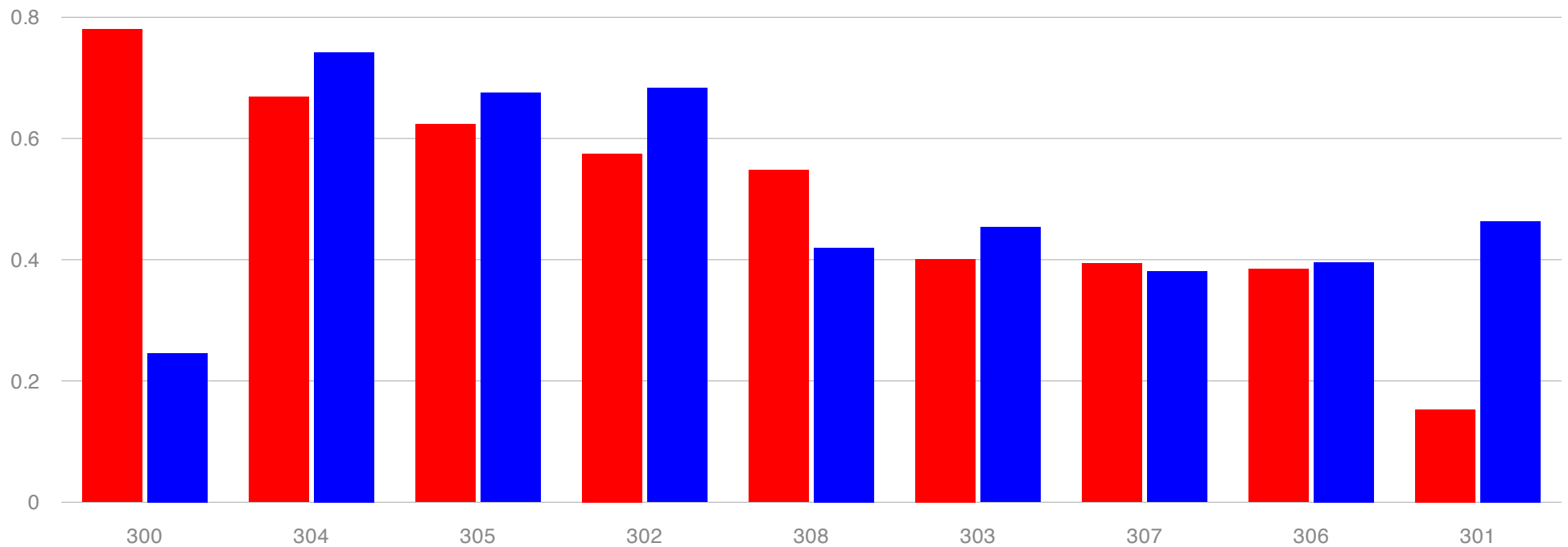
- **Off-road traffic law and other laws.** How could off-road traffic be the best regulated under other existing laws?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 338: Vehicles used in forestry or other business-related activities should be left outside of the off-road traffic legislation.
- 336: Off-road traffic should be regulated under the general Road Traffic Act (267/1981) instead of a specific law. Some issues could be regulated under some other appropriate laws, such as the Vehicles Act (1090/2002)
- 339: Snowmobile riding for leisure should be permitted only on routes and it should be regulated under the general Road Traffic Act (267/1981). Snowmobile riding for other purposes than leisure, such as for professional use like reindeer husbandry and professional fishery, should remain permitted also off the routes.
- 337: Permits for off-road traffic competitions and practicing for competitions should be transferred to the Nature Conservation Act (1096/1996). Currently there is too much room for interpretation and too much decision power at the level of individual municipalities.



Topic

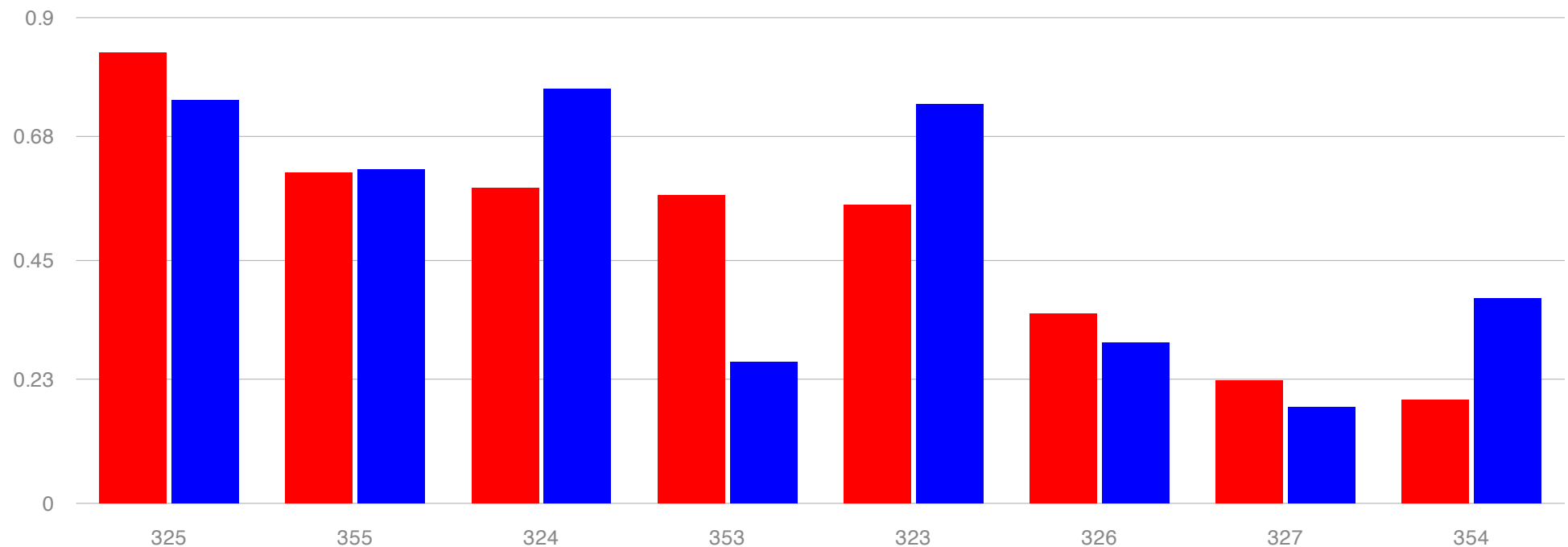
- **Preparatory process.** How could the preparatory process of the off-road traffic law reform be the best improved?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 300: The law reform should be inspired by the Swedish law that is generally considered more permissive than the current Finnish law.
- 304: All the minutes and other documents of the preparatory working group should be published online.
- 305: The preparatory working group should organize local hearings on the law reform.
- 302: A preparatory working group consisting of members representing a broad range of stakeholders for the actual law-writing process should be set up for the preparation of the off-road traffic law.
- 308: When crowdsourcing a law reform using an online platform, the participants should represent all the relevant interests. Crowdsourcing should not be a mere marketing trick but should have a genuine influence on the law.
- 303: SYKE experts (SYKE= Finnish Environmental Center) should participate in the preparatory working group to provide information on environmental impacts.
- 307: When the law reform is done, instruction booklets about the law-reform process and its implications should be written to increase compliance with the new law.
- 306: The preparatory working group should have resources to order investigations on, e.g., environmental issues.
- 301: The law reform should be inspired by the Norwegian law that is generally considered more restrictive than the current Finnish law.



Topic

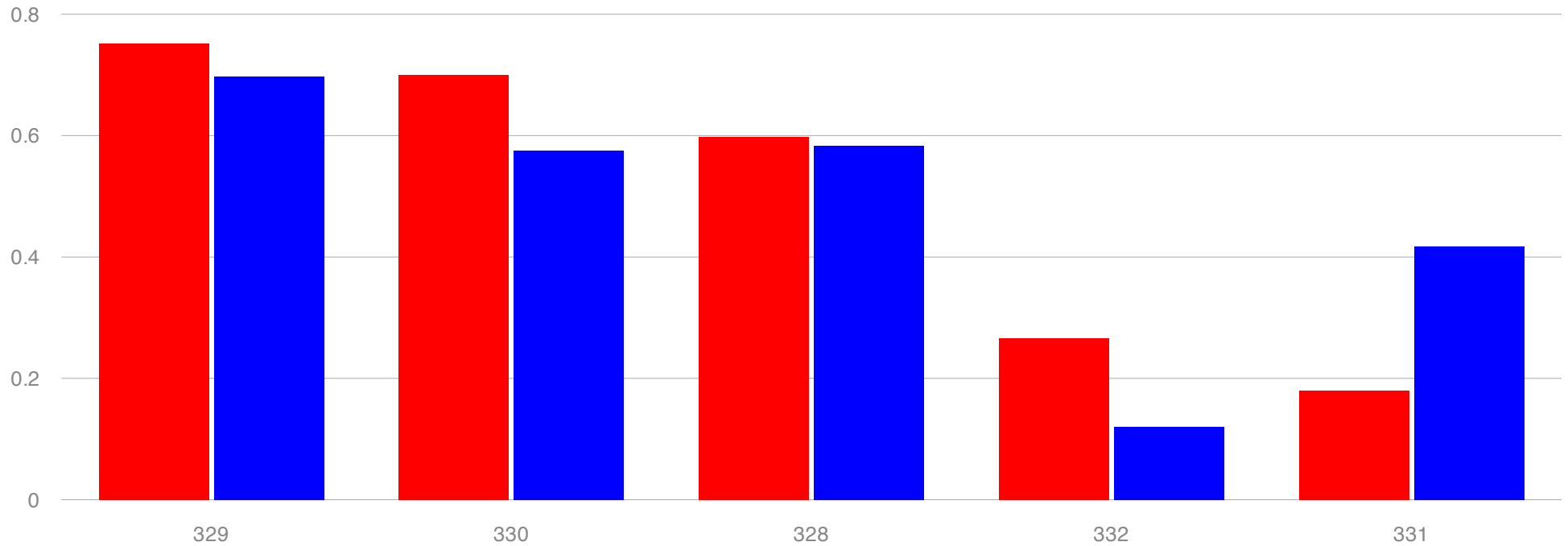
- **Regulation of harm to nature, environment and neighbors.** How could the natural environment and wildlife be the best taken into account in the off-road traffic law?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 325: If established snowmobile routes are opened for ATV's for summer use, the routes for summer use should be evaluated on a case-by-case basis. This means that each route should be evaluated independently whether it can be used in summer time as well. The impacts of the summer use of the route have to be evaluated separately.
 - 355: There should be more education of the younger generation about environmental ethics, so that they learn to respect nature more.
 - 324: The law should have sufficient criteria for preventing, mitigating and compensating harm.
 - 353: According to the "Swedish model," riding of snowmobiles with at least 50 cm wide and/or 390 cm long trail chain/rollers is allowed. Minimum length for a narrow roller/trail chain should be 4 meters.
 - 323: A better or a more specific criterion than "considerable harm" should be defined in the law to refer to the harm off-road traffic causes to the natural environment.
 - 326: The Ministry of Environment should conduct comparative research on other countries' restrictions in order to establish relevant limits for gasoline emissions in Finland.
 - 327: The law should include restrictions for off-road traffic emission pollution.
 - 354: Illegal hunting by using off-road vehicles should be decreased by requiring the installation of a GPS tracking system in off-road vehicles.
-



Topic

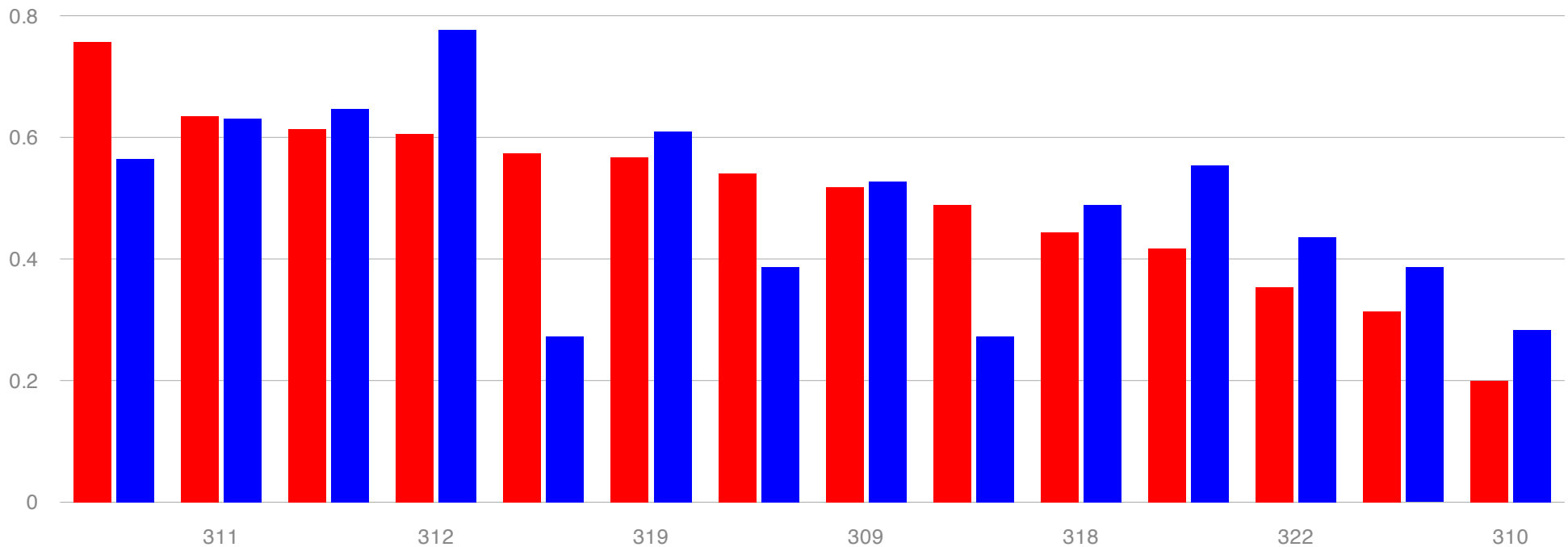
- **Regulation of harm to nature, environment and neighbors.** How could the nature be the best protected by regulating traffic locations?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 329: No-go areas (no-go areas refer to areas in which off-road traffic is banned) should be established and their size should be based on the distance to endangered species, eagle nests, and such and listed in the guidelines of the authorities.
- 330: Routes should go around small water areas and precious environmental and wildlife areas.
- 328: No-go areas (no-go areas refer to areas in which off-road traffic is banned) should be established to protect nature.
- 332: Community organizations and nature conservation organizations should have the right to apply for restrictions to off-road traffic in some areas.
- 331: Vast forest areas should be kept free of human activities and reserved for wildlife only.



Topic

- **Regulation of harm to nature, environment and neighbors** How could the noise caused by off-road traffic be the best managed?

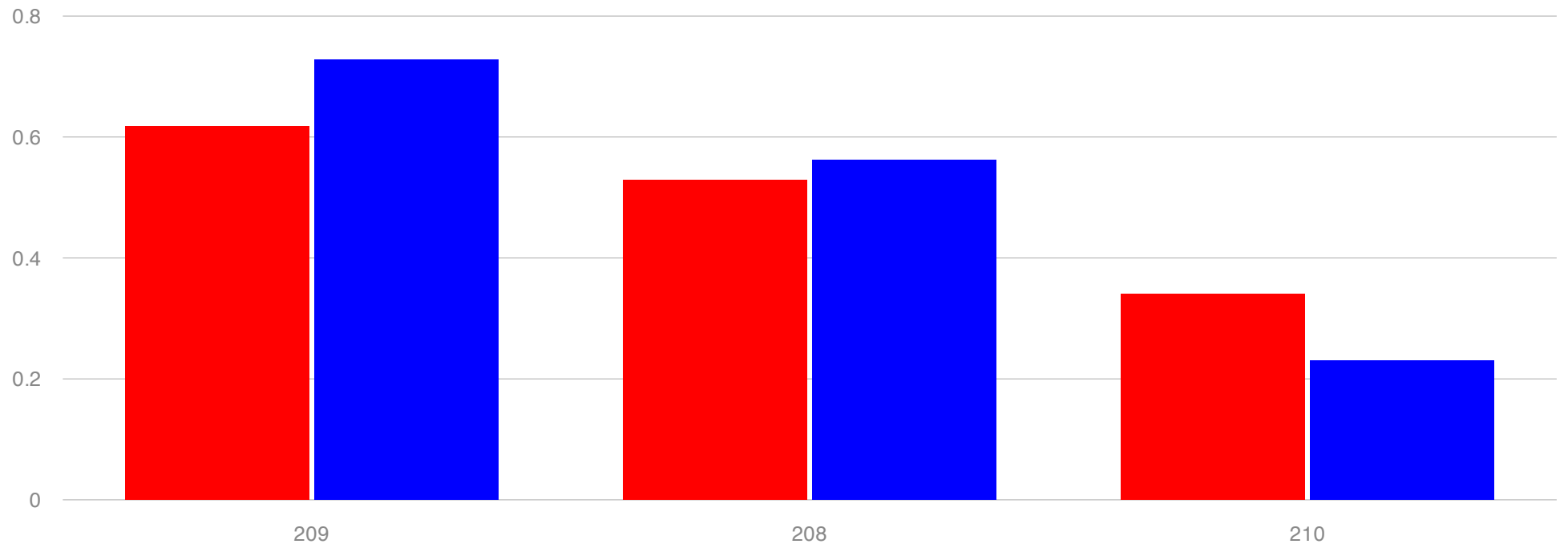
Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 316: In order to reduce noise, off-road traffic routes should be far enough from residential areas.
- 311: Routes should be established with a minimum distance to residential areas. The more traffic there is on a route, the greater the distance should be between the route and residential areas. The minimum distance should be 1 km.
- 314: The off-road traffic law should include restrictions for off-road traffic noise pollution limits.
- 312: No off-road routes should be allowed closer than 1 kilometer from quiet areas or recreation areas marked in urban planning zones.
- 320: When making noise level evaluations for route plans, noise levels of other ongoing projects, such as building projects and the joint effects of the routes and projects on quiet areas, other recreational activities and animals should be taken into account.
- 319: Proper noise level evaluations and predictions should be included in the route plans and applications.
- 317: In order to reduce noise, there should be payment waivers for light snowmobiles with small motors that travel at a lower speed.

- 309: Vehicles should have a speed limit of 30 km/h near residential areas.
- 315: There shouldn't be any regulation in the off-road traffic law regarding noise pollution levels.
- 318: The term in the current law "considerable harm" should be replaced with a stricter term, for instance one like "greater than little harm".
- 313: Noise limits for off-road traffic should be more restrictive than for regular traffic.
- 322: Routes should be narrower than 6 meters. This would keep noise levels down as narrower routes don't allow fast and noisy riding.
- 321: Snowmobiles and ATV's should be taxed according to their noise level and gas emissions.
- 310: Snowmobiles should be powered by electricity. This would decrease the noise level.



Topic

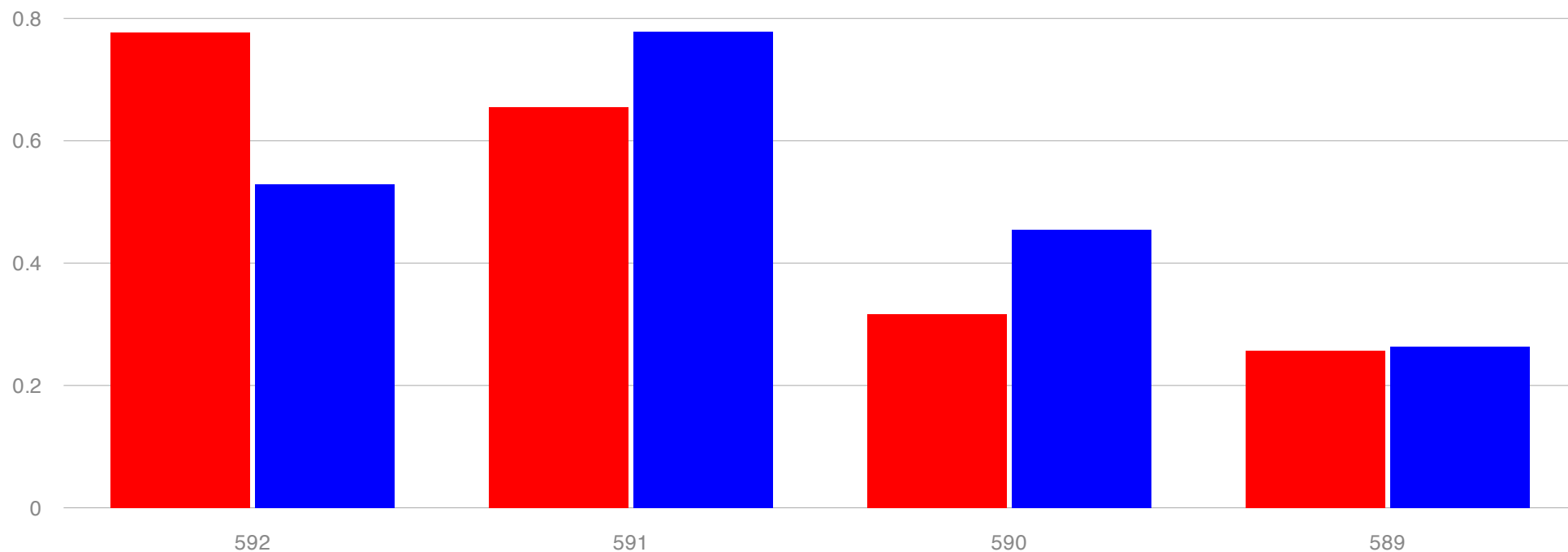
- **Route impact evaluations.** If the law regulated about the impact evaluation, how could the impact evaluation be arranged so that the financial aspect could be measured the best?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 209: Impact evaluations should include a cost-benefit analysis for all parties involved (i.e., who benefits from the route and by how much, who is harmed and loses out because of it, and by how much).
- 208: Impact evaluations should include all the estimated financial pros and cons.
- 210: Impact evaluations should include an estimate of of how many state funds will be used for the route and how much revenue the route will bring in return.



Topic

- **Route impact evaluations.** If the law regulated about the impact evaluation, how could the impact evaluation be arranged so that the impact on natural environment would be the best measured?

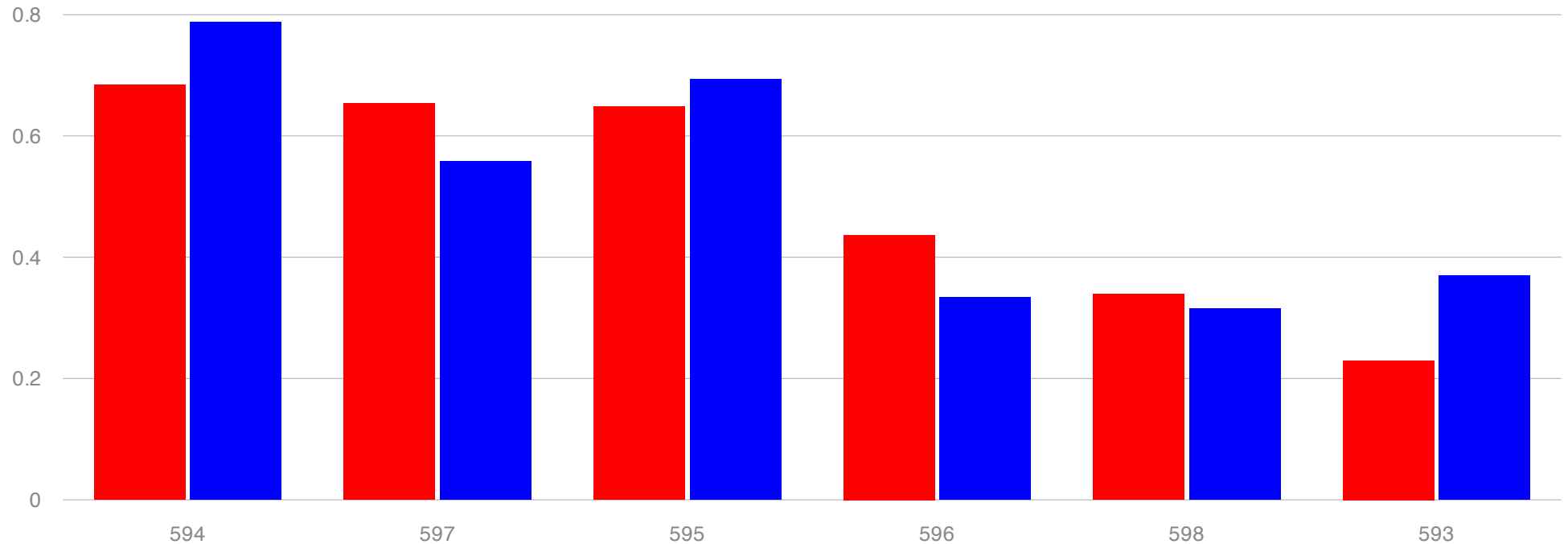
Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 592: Impact evaluations should include proposals on how the routes could bypass sensitive wildlife areas

- 591: Impact evaluations should include proposals on how to mitigate the harm to nature.
- 590: Impact evaluations should include an estimate of the impact of the route on water pollution and noise levels
- 589: Impact evaluations should include an estimate of the impact of the route on endangered species.



Topic

- **Route impact evaluations.** If the law regulated about the impact evaluation, how could the impact evaluation be arranged so that the overall impact of off-road traffic could be taken into account?

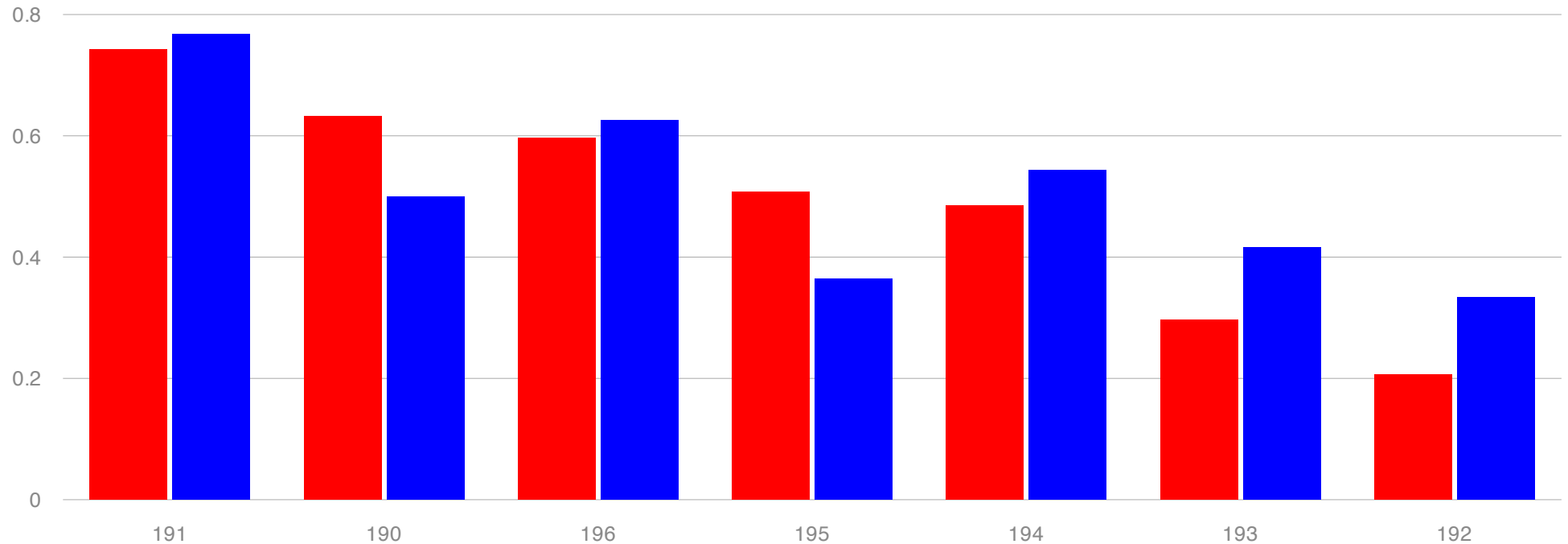
Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 594: Impact evaluations should cover the full life-span of a route, i.e. the construction period, the period during which the route is in use, and the period after the route is no longer in use.
- 597: Impact evaluations should include alternative locations for the planned route.

- 595: Impact evaluations should include an explanation and justification for the claimed need for a route.
- 596: Impact evaluations should include an explanation of the consequences if the route won't be established.
- 598: Existing GPS-tracking data of snowmobile traffic should be used when drafting the impact evaluation. The data could be used to verify the amount of traffic and to estimate the impact.
- 593: Impact evaluations should take into account the joint effects of any other ongoing or planned projects in the area that add to the area's noise and traffic levels. For instance they should take into account any planned development sites and other projects carried out simultaneously that impact the area's levels of noise and traffic.



Topic

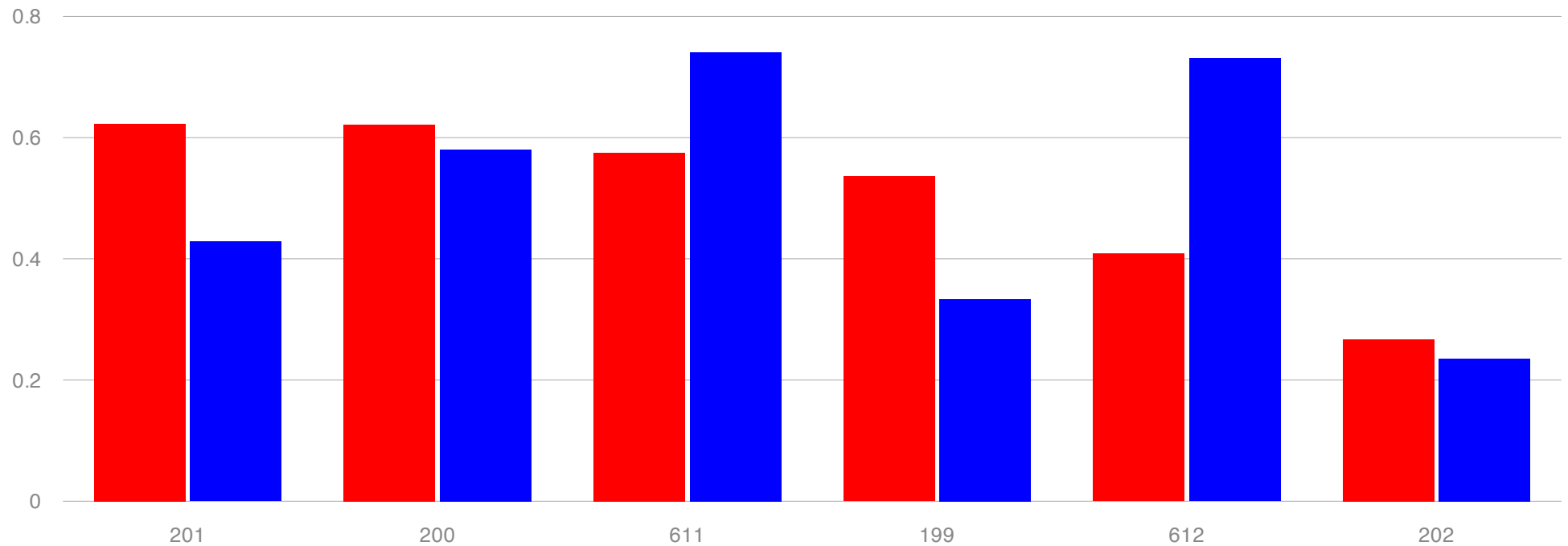
- **Route-setting procedures.** How to best spread information about route plans and procedures?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 191: Criteria for route permits for new routes and related impact evaluations should be made public and published online.
- 190: All hearings and decisions about route plans and route-setting procedures should be announced online and in the local newspaper.
- 196: When planning, renewing or building an off-road traffic route on private property, all affected parties should be contacted by personal mail or other means.
- 195: The route plan should be made accessible to the public at least 30 days before decisions are made. This regulation is currently part of the Outdoor Recreation Act in Finland. (606/1973).
- 194: Any plans for new routes should be communicated locally early and widely, even before a landowner meeting is scheduled. This could be done through newspaper announcements, so that locals have a chance to familiarise themselves with the plans and the anticipated consequences of the planned route.
- 193: Neighbors should be invited to route planning events, even if the route or trail is established based on a two-way agreement between the landowner and a snowmobilst only.
- 192: Environmental experts (e.g. environmental associations) should be involved in route planning activities and events.



Topic

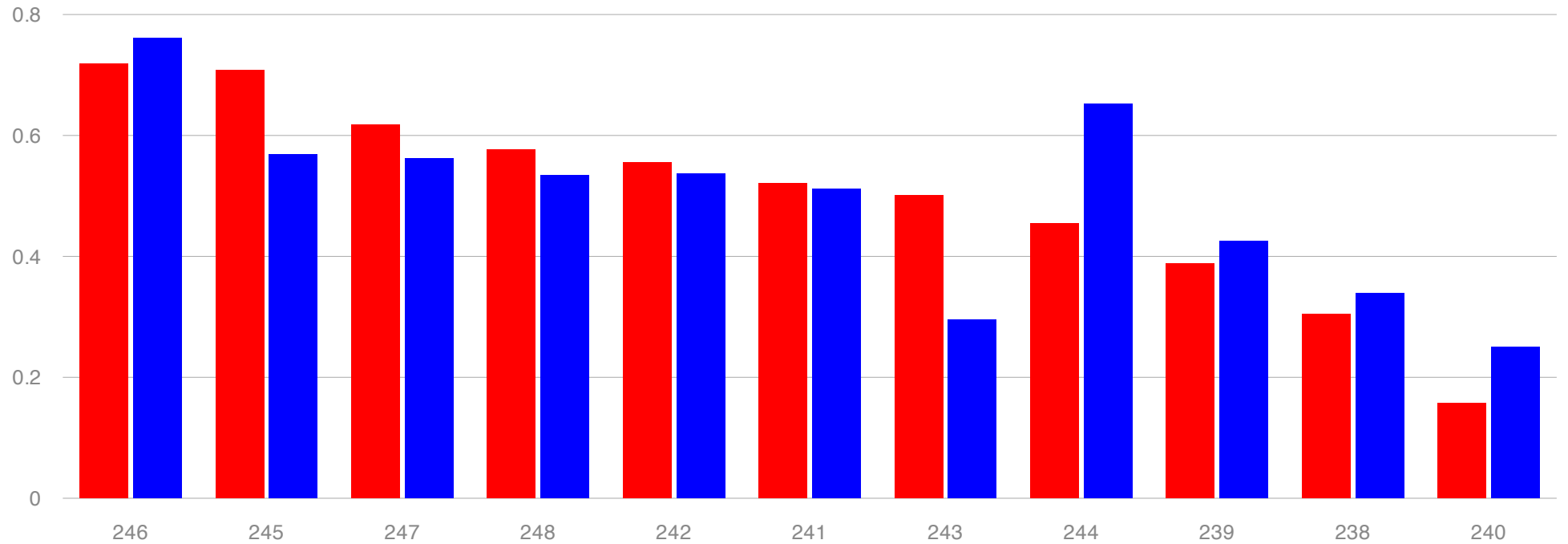
- **Route-setting procedures.** What kind of requirements route plans should have?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 201: A route plan should include a description of the anticipated route usage.
- 200: Applications for routes meant for common use should require proper route plans indicating the location, anticipated traffic amounts, and types of vehicles expected to use the route.
- 611: A proper impact evaluation should be conducted for each route.
- 199: When applying for a new route, the applicant should present an extensive route plan.
- 612: During the route-planning phase, a proper and thorough evaluation should be conducted that assesses the impacts of the route for the natural environment.
- 202: Route plans should also be made for ice-covered grounds if those are part of a route.



Topic

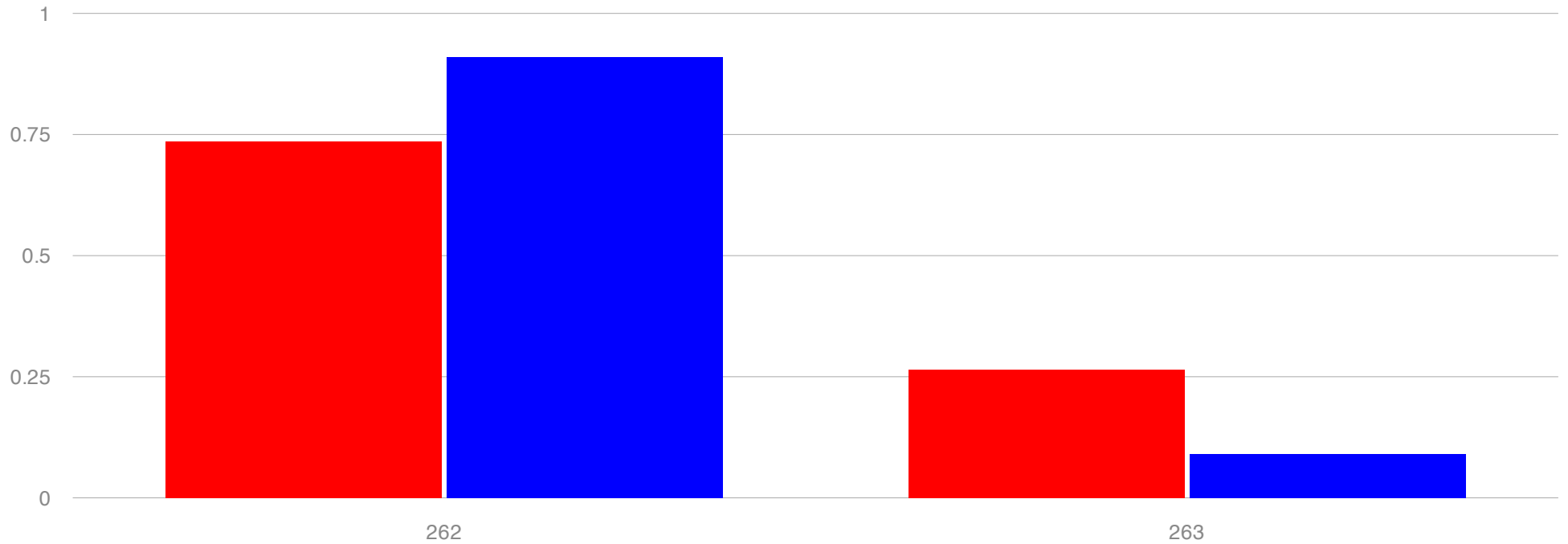
- **Safety.** How to best improve the safety of off-road traffic by changing driver’s license requirements for off-road traffic and requiring training for snowmobile riders?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 246: Snowmobile owners should be encouraged to join their local snowmobile club to be informed about areas that allow snowmobile riding.
 - 245: Snowmobilers should be encouraged to register with local or national snowmobiling clubs to receive training and information about off-road traffic safety.
 - 247: Snowmobile owners should be encouraged to join their local snowmobile club to be informed about new regulations and restrictions in riding areas by, for instance, a group text-messaging system.
 - 248: Snowmobile owners should be encouraged to join their local snowmobile club. The police and other officials could use this communication channel to reach all members
 - 242: If there was a specific driver's license for off-road traffic, one driver's license could be valid for all off-road traffic and road transit.
 - 241: If there was a specific driver's license for off-road traffic, it should be sufficient if the group guide is a license holder when a group is snowmobile riding.
 - 243: If there was a specific license for off-road traffic, those who would have an off-road traffic driver's license should have more rights to ride freely off established routes than those who have not.
 - 244: The off-road traffic driver's license training should provide information on forestry economy, environmental values, navigation etc.
 - 239: A driver's license for regular cars should be required for riding off-road vehicles.
 - 238: A specific off-road traffic driver's license should be created.
 - 240: An off-road traffic driver's license should have the same requirements as a motorcycle license.
-



Topic

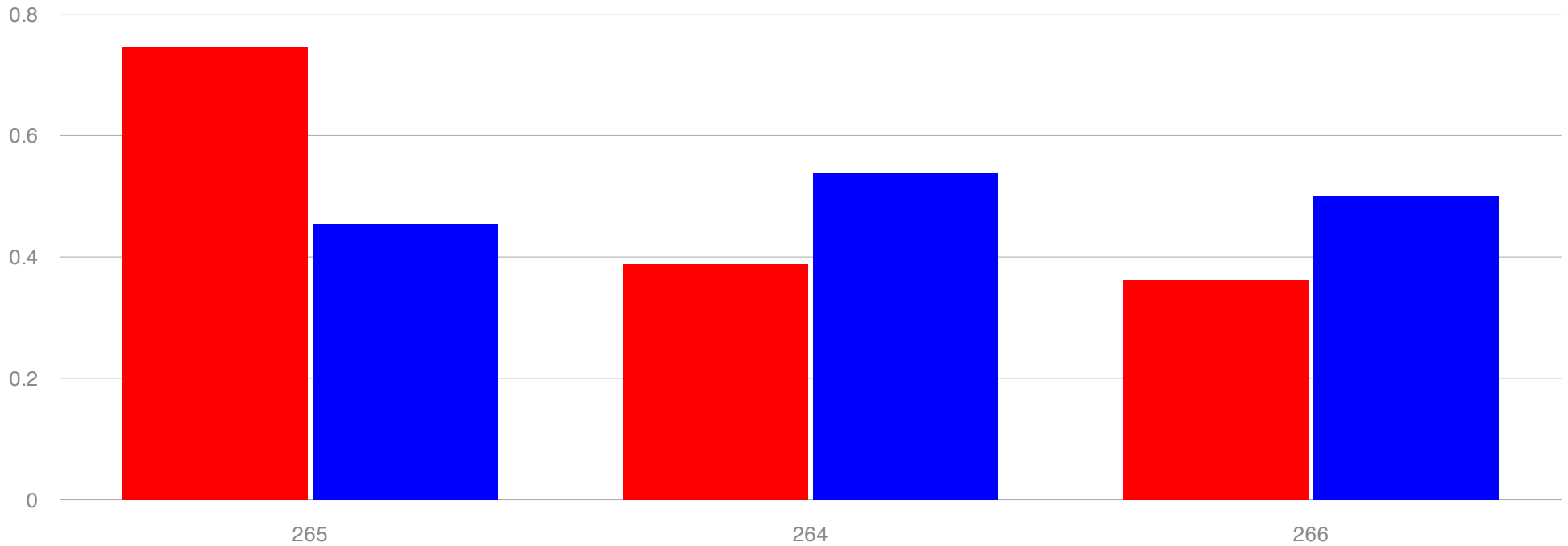
- **Safety.** How to best improve the safety of off-road traffic by defining requirements for the vehicle equipment?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 262: License plates and turn signals (indicators/blinkers) should be required on all snowmobiles.
- 263: Only snowmobiles with roller width of at least 50 cm and/or length of 390 cm should be allowed. Minimum length for a narrow roller should be 4 meters. These wider snowmobiles better remain on the snow surface.



Topic

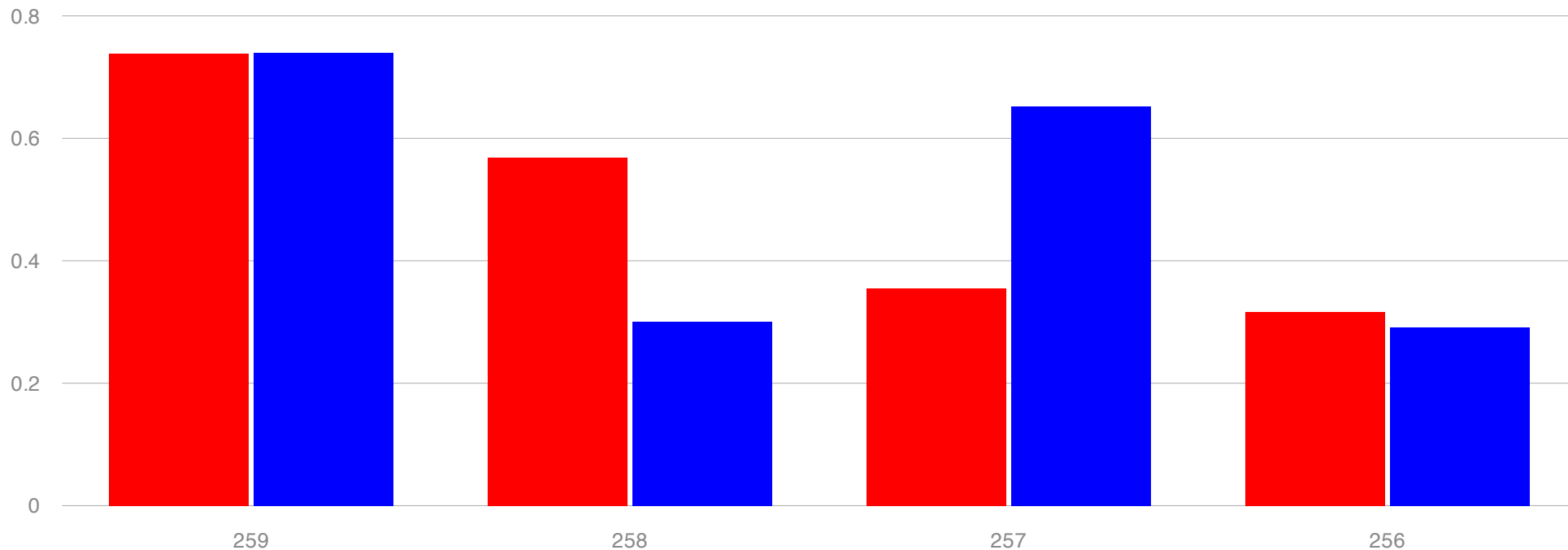
- **Safety.** How to best improve the safety of off-road traffic by increasing the number of routes, allowing riding on regular roads and legalizing off-route traffic to connect between routes or trails?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 265: In addition to official routes, there should be areas that are designated for “free snowmobile riding”. In these ‘free-riding zones’ for snowmobile riding, riding is not limited to designated routes.
- 264: Improve safety by creating more routes in areas where it is safer to ride a snowmobile.
- 266: Snowmobile riding on regular roads should be allowed provided riders are equipped with motorbike insurance, license plates, properly installed turn signals, and lights.



Topic

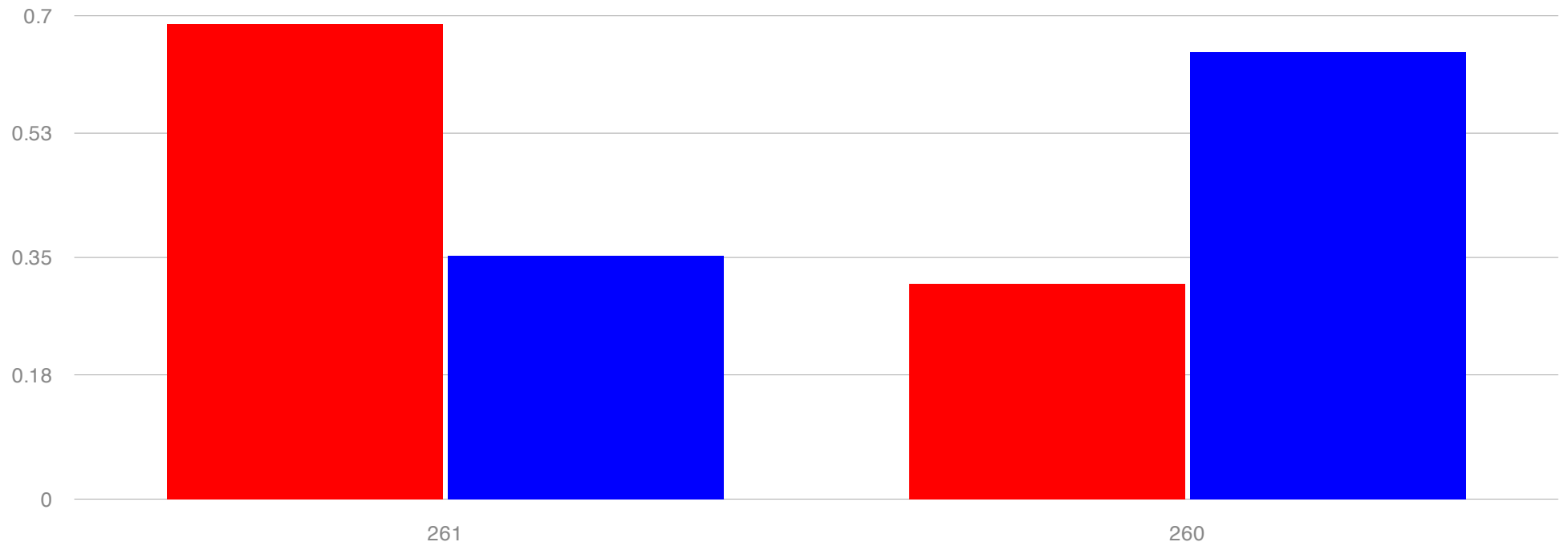
- **Safety.** How to best improve the safety of off-road traffic by regulating monitoring systems?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 259: Landowners should be authorized to ban repeating off-road traffic regulation offenders from their property.
 - 258: Improve safety by deploying more police forces to monitor off-road traffic.
 - 257: RFID-sticker should be added to all vehicles.
 - 256: GPS-tracking system should be added to all vehicles so that vehicles can be located when needed and risky areas can be mapped.
-



Topic

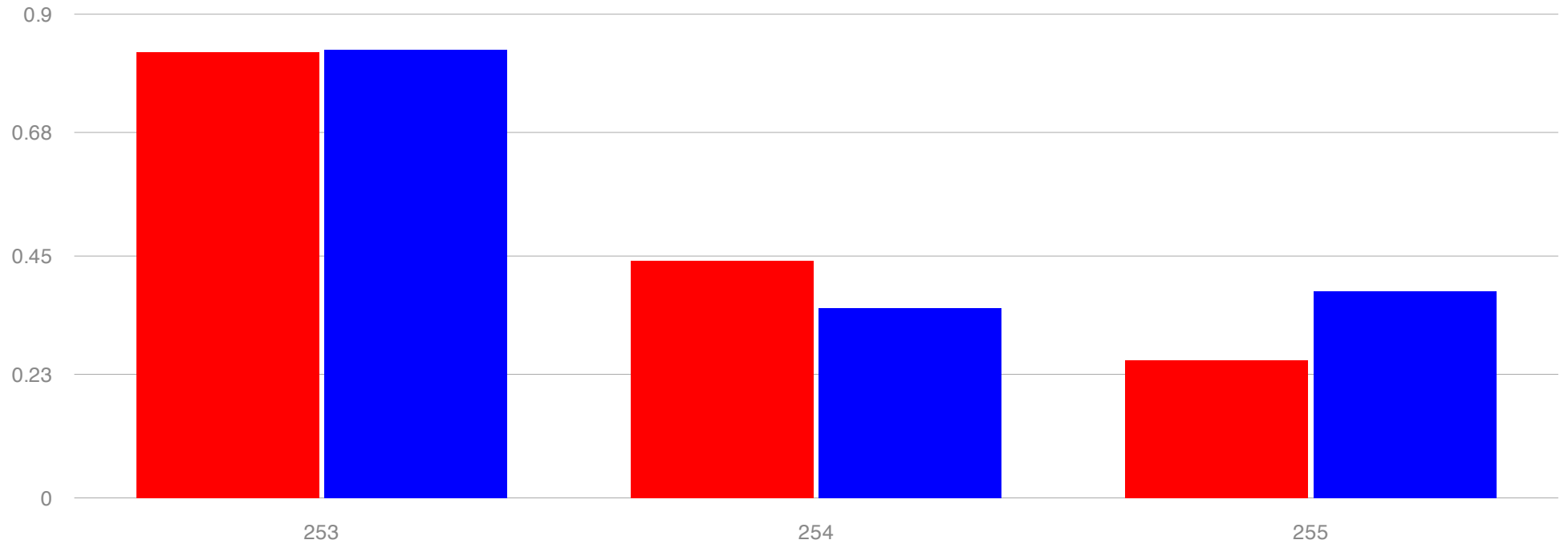
- **Safety.** How to best improve the safety of off-road traffic by regulating the alcohol tolerance level in off-road traffic?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 261: The blood alcohol limit for snowmobiles should be the same as for other motorized vehicles.
 - 260: A zero alcohol tolerance should be set for off-road traffic.
-



Topic

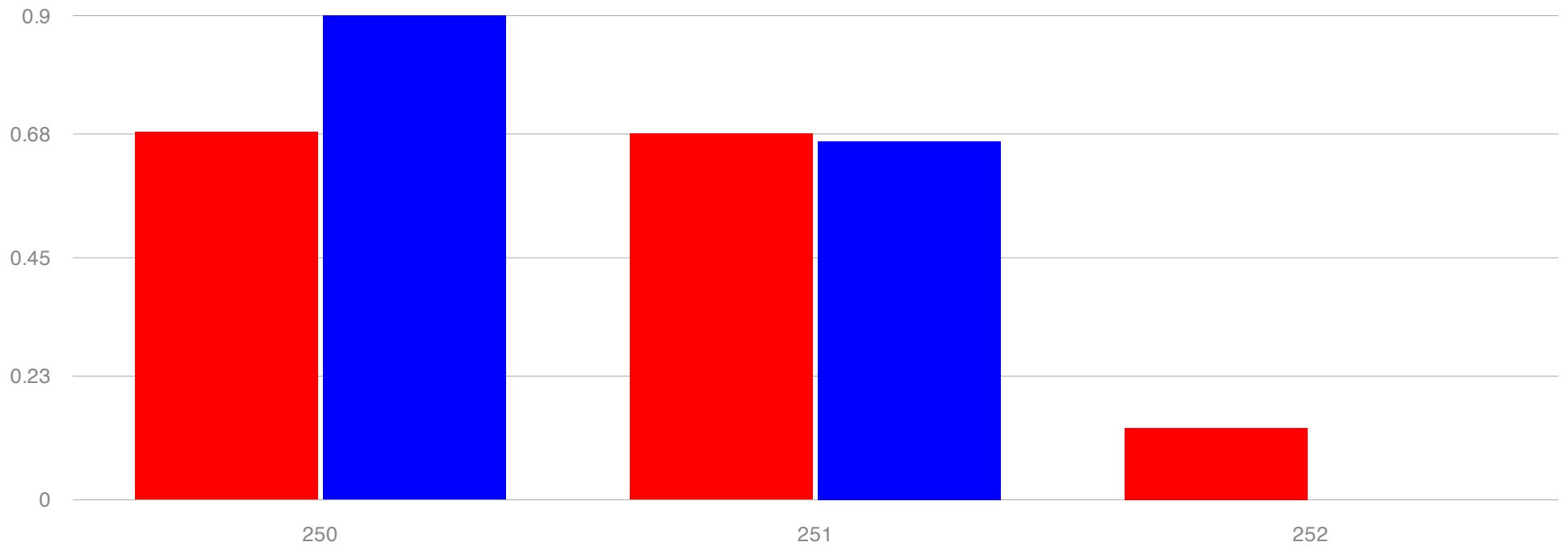
- **Safety.** How to best improve the safety of off-road traffic by traffic arrangements?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 253: The use of right-hand side traffic should be made the norm when riding in open areas such as on ice and in swamps. Riders should pass route signs on the right side. This would decrease the number of accidents.
 - 254: Roundabouts should be built in route intersections when there's space for those.
 - 255: The speed limit for snowmobiling should be set at 60km/h in all areas.
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Topic

- **Safety.**How to best improve the safety of off-road traffic by regulating driving age?

Metric Legend

- All users, (307 users)
- Minority cluster, (47 users)

Proposals

- 250: The age requirement for riding off-road vehicles should be kept at 15 years.
- 251: The age requirement for riding off-road vehicles should be changed to 12 years with certain conditions: 12-year olds should be allowed to ride off-road vehicles when accompanied by a supervising driver age 18 and older who has a license valid for off-road vehicles. For independent riding the age requirement should be kept at 15 years.
- 252: The age requirement for riding off-road vehicles should be changed to 9 years.