Amsterdam Bike City
Bicycle Innovation Lab - *spring 2022*
Versie 1.1, 14 April 2022

Jury report

Introduction

The bicycle is indispensable in the city of Amsterdam, the region, and the rest of the Netherlands. Amsterdam and the region have been working for over forty years to make cycling safe, accessible, and attractive for everyone. The Municipality of Amsterdam and the Amsterdam Transport Region make unique cycling knowledge available through the Amsterdam Bike City (ABC) platform.

The Amsterdam Bicycle Innovation Lab was conceived to collect new (bicycle) ideas, give them a platform, and investigate whether ideas can be turned into scalable innovations. This is how new cycling knowledge is developed. The Bicycle Innovation Lab started on 13th January 2022 by opening a request for ideas. The theme of this edition is Bicycle and Road Safety, with an emphasis on "Different speeds on the cycle path". Anyone can submit his or her idea to increase bike safety. We have asked for ideas that can be applied in the Amsterdam region, so participants must demonstrate that their idea fits into the Amsterdam context and contributes to solving our issue.

The process

A total of 37 submissions were received, we are pleased with this number. The ideas were conceived by students, start-ups, commercial parties, and consultancy firms, among others. A pre-selection has taken place from which a top-10 has been formed. All entrants were able to promote their own idea to the public. The five most popular ideas made it through the selection by means of a public vote. In total, we received 2.139 unique votes. 114 votes have been removed due to the fact that these people have voted multiple times.

The official guidance group, consisting of employees of the Municipality of Amsterdam and the Amsterdam Transport Region, assessed all submissions and also selected five ideas. The five ideas from the public vote and the five ideas proposed by the official guidance group together formed a top 10.

The ten selected entries were pitched to the jury on March 29th. This jury consisted of five professionals involved in cycling, academia, road safety, and innovation.

➔ Marco te Brömmelstroet – Professor of Urban Mobility Futures at the University of Amsterdam
➔ Ilona Kemps – Project lead start-up in Sustainability & Mobility at Startup in Residence
➔ Esther van Garderen – General Director of the Dutch Cyclists' Union
➔ Tim Coronel - Professional racing driver and road safety ambassador
➔ Otto van Boggelen – Program Manager at CROW-Fietsberaad (Dutch knowledge centre for bicycle policy)

After the pitches, the jury members awarded scores that formed the basis of jury deliberation. During the jury deliberation, the jury selected a number one, two and three.

The official guidance group discussing all submissions

All ideas from big to small were welcome. This is reflected in the submissions. The entries are very varied. Some examples are:

Safety adjustments to the bicycle itself, safety systems for e-bikes and scooters to warn road users for dangers, entering speed limits on bike paths, or a safe cycling app that rewards cyclists for cycling safely. The use of data was regularly recurring, for example offering the safest route option to cyclists based on data.

The jury looked at different assessment criteria:

- **Relevance**: Is it a recognized problem? Do other cyclists recognize themselves in this situation?
- **Innovative & original**: To what extent is the idea innovative in the Amsterdam region?
- **Incitement to action**: How does this idea encourage people to change behaviour, making (bicycle) traffic safer?

- **Feasibility**: To what extent can this idea be tested in the Amsterdam region within a year? And what is needed for that? And to what extent can this be applied more broadly?
- **Demonstrating a positive impact**: Based on this idea, how can you demonstrate that bicycle traffic safety is improved?

The participants presenting their ideas to the jury

How to read this report

This jury report contains all entries with a summary of the jury comments. In the first chapter, the top 10 entries are elaborated on in detail. In the second chapter, the other entries are elaborated with a number of strengths and weaknesses. The last chapter describes the continuation of the Innovation Lab.

The intellectual property rights of all ideas remain with the proposer of the idea and may not be taken over by third parties. All participants agreed with the publication of the ideas on media channels.

1: Rating of the top-10 submissions

In this first chapter of the jury report, a description is given of the jury assessment of the ten entries that passed the first selection round. These ten candidates pitched their idea to the jury on Tuesday 29th March 2022. This chapter first explains the entries that the jury has classified in the top-3. Subsequently, the jury's judgments of the other seven ideas that have been pitched will be described in random order.

Winning idea: 30 – 20 – 10

The entry 30-20-10 immediately sparked enthusiasm among the jury members. The idea is simple: the number of road users, the different speeds of these road users and their mass of their vehicle make accidents dangerous. That is why we must go back to basics: give road users a place on the road based on speed. To minimize the interaction of fast and slow, of heavy and lightweight. The idea is not focused on vehicles, but on speeds, which avoids many discussions.

The jury is charmed by this idea. It is simple, explainable, and relevant. According to the jury, this idea fits in the vision of the future for the city of Amsterdam. This idea is also a practical translation of this vision and a good tool for starting discussions and it can trigger a lot. A starting point can be: investigate the practical feasibility and start conversations with key stakeholders, for example by projecting this idea on specific locations in the city or region. The results form input for new (cycling) policy plans and concrete actions on the streets.

The winning idea addresses an integrated solution. But that also leads to a challenge: How do we proceed with this idea? Policy and legislation also create restrictions: not everything is possible or easy to implement. We therefore want to challenge the prize winner to further develop his idea with us, with two perspectives at base: thinking and doing.

- ✓ Thinking. The idea is not immediately feasible to its full extent and requires further research. We want to work with the winner, contact key stakeholders, project this idea on several locations and seriously think about what is possible and what is not.
- ✓ Doing. Linked to the thinking perspective, we will look and search for the possibilities to experiment outside, in the Amsterdam region. We will share this via the ABC channels.

Above all, the jury was enthusiastic about this idea because of its simplicity and integrality. In the elaboration of the winning idea, we are curious whether combinations can be made with other high ranked ideas, which solve a part of the addressed problem. Some ideas could perhaps form part of the practical implementation of the winning concept.

Second place: Children superheroes and bike paths

The entry 'Children superheroes and bike paths' turned out to be the favourite submission in the public voting and was awarded second place by the jury. Children have the right to express their opinion and perspective on urban planning and development, but they are not taken seriously when designing safe streets. Their goal is to transform the bike lanes from a child's perspective and use superheroes to communicate the changes. It is important to regulate the speed of cycling if it means safer space for children's development. That is why the goal of this project is: To improve road safety on bicycle paths by regulating the speed of the bicycles, so that, in the event of an accident, there are no serious injuries or deaths. Considering children's perspectives when transforming cycle paths so that they become a shared space (a space where children feel safe when cycling).

The jury was enthusiastic about this idea because the problem of bicycle safety is approached from a different perspective: by children. The jury is pleased that an extensive concept has already been developed and that different solutions to the problem can be tested immediately. The jury had only two objections to this idea. One of the solutions contains sliding parts, which could cause dangerous situations when cycling with higher speeds. In addition, this idea is mainly about motivating people to cycle slower, without considering people who want to cycle fast.

Third place: Road Sign Safe Cycle Path

This idea came in third place. This entry describes an experiment to test a new road sign for a safe cycle path. With a symbol of people on bicycles, the new sign shows that a cycle path is a safe place for all cyclists: young, old, slow, fast, just for everyone. According to them, this fits better than the current sign for a bicycle path that only shows a bicycle, a thing. Images of people evoke the association with vulnerability, objects, and texts do not.

The jury finds the simplicity of this idea appealing. It makes the idea easy to implement. Moreover, the jury sees advantages in making traffic signs human. Cyclists are humans. And you have more empathy with humans than with a means of transport. It is good that this road sign will replace the existing signs instead of being added as an extra sign. Moreover, the pilot is designed well.

However, the jury wonders to what extent this idea will make an impact. The approach is perhaps too simplistic to achieve a substantial impact. In addition, the sign signals that safe cycling is taking place within the indicated area, does this imply it does not happen outside this area?

➔ The rest of the top-10 submissions will be processed in random order.

Micro mobility ecosystem

The "Micro Mobility Ecosystem" is an open cloud-based online community where cyclists are connected to intelligent traffic technology. Partners can collaborate on new services for cyclists and insights are created for policymakers. Essentially, everything is built around the core

transaction: access to intelligent traffic technology in exchange for the privacy-safe delivery of Floating Bike Data. According to the jury, the idea has been worked out well and extensively. Moreover, the jury sees opportunities in the open-data aspect of this idea. However, the idea is not completely new and already exists to some extent. The jury also finds it difficult when citizens act as a 'data generator'. Finally, the jury notes that insight into cycling behaviour through data does not contribute to making the cycling experience more humane.

On the bike, only good vibes

The problem describes a situation in which there are more and more fast road users, and it's difficult to adjust the behaviour - i.e., the speed - of these road users. The idea is therefore to warn vulnerable cyclists when they are overtaken by another road user. This warning comes in the form of vibrations in the smartphone of vulnerable road users. The advantages are not only for non-motorized citizens, as the app will provide benefits to those motorized users with points and benefits for making the city safer.
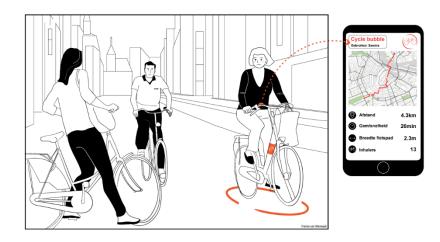
The jury thought the problem description was original and it was good that the definition of danger was shaped by its own experiences. In addition, the warning can be issued on various devices, such as a smartphone, a smartwatch, or wireless earphones.

The jury wonders whether all road users must have downloaded the app before someone reliably receives notifications for every road user who overtakes. In addition, the jury notes that not all road users have smartphones or other devices on which this report can be issued. The jury wonders how the data of the users of the app is handled. Overall, a good submission, but the implementation of the idea seems difficult.

Cycle Bubble

This idea also focuses on the vulnerable cyclist. The idea is to indicate the desired distance from other road users through lighting on the road surface, so that insecure cyclists dare to get on their bicycles with more confidence. If another road user enters this 'bubble', the bubble changes colour and thus gives the signal that someone is getting too close.

The jury was very content with this idea. The bubble itself is already leading to a moment of awareness among other road users that there's a vulnerable cyclist. It's a likeable idea and using the technology can create a sense of security. However, the jury wonders whether this idea works in daylight and whether there is enough space on the cycle path if all cyclists have a bubble. Moreover, this idea already exists among cyclists and the jury wondered if the vulnerable cyclist is the one who should solve the problem.

Amsterdam's core in the flow

The proposal focuses on three main strategies that will deal with speed, density, and private vehicles in the city centre. These strategies should make the city safer. The jury believes that the problem is well defined during the pitch, and all people in Amsterdam recognize themselves in this. In addition, the jury likes the fact that several ideas are put forward. The jury is most enthusiastic about the radical nature of the idea, namely the extension of rules across the entire city centre. But this makes it also difficult to test the idea. The question also arises of how desirable it is to implement these ideas, namely giving people points for good or bad behaviour. This affects the freedom that users experience on the bicycle.

Speed Split

The Speed Split concept proposes a simple and universal design that reorganizes the street by indicating the appropriate speed and not the appropriate vehicle to be there. It divides the street in stripes of different suggested speeds. This creates a more shared space, guided by visual icons and materials that are already used to steer behaviour in Amsterdam.

The jury thinks this is a good idea, and the concept is simple. However, the idea is not very innovative and has not yet been worked out well, so it's not clear how this can be implemented in practice. And the winning idea addressed the same issue, but more tailormade for Amsterdam.

Ring, Thanks, Go!

The target behaviour pursued by the originators of this idea is that the fast cyclist makes it known that he wants to overtake. When he is given space to do so, the overtaken cyclist thanks. With this intervention, the association with calling and aggression or pushiness is converted into an association with positive things, such as friendliness. The social norm is being adjusted.

The judges like the social design of the idea and it is easy to implement. The jury is positive about the approach of the intervention, namely safer overtaking by e-bikes and fast cyclists. This intervention can resolve annoyances between cyclists. However, the jury has reservations about the feasibility of this idea. The idea is very simple and behaviour change is difficult to achieve. The

jury wonders whether this intervention leads to more safety. In addition, the jury believes that this entry has more of the nature of a campaign rather than innovation. The presentation of this idea was very original and creative and appreciated by the judges.

The Ringer

The biggest problem in riding your bike in the city is that many factors are causing unsafe situations on the road and these factors are constantly changing. The Ringer is a smart bike bell that warns you with a light signal whenever you're close to a dangerous hotspot in the city. Every time you ring it the system tags your specific geolocation as potentially dangerous. This way the Ringer is also a gatherer of data that can be used to detect dangerous locations in the city even before accidents happen.

The jury thought that the idea was well presented. It's a simple idea that's relatively easy to implement. In addition, the idea of testing The Ringer with bicycle couriers is a smart one, in this way a lot of data is collected within a short time. The idea is not new, however, something similar has already been carried out during the 'Ping if you care' experiment of the municipality of Amsterdam. In addition, the judges question whether the reason for ringing always has to do with potential hazards, or whether there may be other reasons why cyclists ring. It is therefore questionable whether ringing generates the data that the inventors want to generate and how great the validity is within this experiment. Moreover, the jury wonders when one can speak of 'danger'. Overall, it's a good idea, but the judges question the idea's viability.

2: Other submissions

This chapter lists the submissions that did not pass the first selection round. Although there were many good ideas among them, these submissions didn't make it into the top-10 to pitch the idea to a jury. This chapter summarizes the strengths and weaknesses of the ideas that emerged during the selection by the official guidance group.

Submission	Positives	Negatives
➔ Lowest acceptable technical state of bikes	Good to pay more attention to the bicycle bell.	- The local government has no role in enforcing adjustments at the bicycle level. - These proposals make cycling less accessible.
➔ Best bike for daily urban cycling	- Good for developing an efficient city bike for private individuals. - Speed limits can be a good development.	- The local government has no role in the development of bicycles for private individuals. - Technical adjustments have no influence on behavioural change.
➔ Active Safety for Light Electric Vehicles	The sub-concepts may be applicable. It can also be good to apply this to shared scooters and flash couriers.	- Concerns adjustments at the bicycle level, local government has no role in and cannot enforce - People start to trust technology, while the behaviour is what matters.
➔ Separate slow and fast bikers	Good idea, cyclists recognize themselves in the problem.	- Difficult to achieve and barely places to test this. - Cyclists do not recognize themselves in the solution. - Creates large speed differences, following traffic believes it has right of way and this can cause dangerous situations.
➔ Predictive data for safer micromobility	- Behaviour is well portrayed.	- Unclear how the idea relates to already existing initiatives - Appears to be a pre-existing tool that determines dangerous points in the profile.
➔ Empathy Speed assistant	The idea is relevant, original, and innovative, and incites action.	- High score, but not realistic and difficult to implement.

		- It would be better to set an overall speed limit than to brake continuously when you approach another cyclist. Cyclists then adapt their behaviour, instead of looking for a solution in technology.
➜ Safest Route Option with Machine Vision Software	Convincing technique	- The most vulnerable cyclists must adapt. They will partly already do so and that will give fast road users even more 'power'. - Many cameras are needed. Privacy issues and the cameras require maintenance.
➜ Riding fast? Hit the road!	- It's a detailed proposal, also regarding a specific location. - This leads to more awareness among road users if cyclists also cycle on the road and cars are allowed to drive a maximum of 30 km/h.	- The question is whether it is legally possible to test this as a pilot. - The road is not always suitable for cycling.
➜ Cycling space we all can share	- The idea of testing people-centred design methods and principles in a pilot is a good one. - The process proposal is well developed.	It is unclear what solutions are proposed and what exactly needs to be tested.
➜ People! Take your time, it's nice around here	- Nice idea, gives a different view on cycling through Amsterdam. - The fact that it is proposed to test in one place makes this idea interesting for a pilot.	Unclear what the feasibility of the idea is and whether the Vondelpark is the best location to test this idea.
➜ Speed reduction through real-time communication	- A positive approach to the problem. - The idea seems feasible.	- Signs are likely to be effective only temporarily, or when they rarely occur. - There are plenty of signs along the road these days.
➜ Second lane for e-scooters and e-bikes	This idea would probably work if it were feasible.	- Not feasible, there is too little space for the implementation of this idea. Also, outside the old part of the city, there is not enough space for a second lane.

		- The idea creates speed differences that can be dangerous.
➜ Dynamic speeds for a dynamic city	- The pilot can be carried out between residents and delivery services. - It is good to apply this, for example, for delivery services.	- It is not clear how the local government should play a role in enforcing this idea. - Speed is not the only thing that leads to dangerous situations, the question is to what extent this solution makes the city safer.
➜ Safe Cycling App	Nice that this idea has a positive approach, aimed at rewarding good behaviour.	- Enforcement is an issue. - You can't force people to download an app.
➜ Don't hurry my McFlurry	- Originality award for the title! - This entry responds to a problem that many people experience, namely delivery drivers who cycle (too) fast.	- 'Snitching' is a negative approach to the problem. - People probably find cycling too fast annoying, but want to receive their orders as soon as possible. This idea probably won't work.
➜ Ride the track of unwritten rules	Sounds like some kind of empathy app, which is a fun and original idea.	- How many people will use this? - Provides insight into matters that are already known. - The outcome of this idea is not clear.
➜ Calm down, the majority drive safely	- Good idea that requires adapting to the speed of the 'quiet' majority. - Interesting concept as it appeals to group norms. Positive approach.	- The sign will likely have a temporary effect. - The idea is not very original, for cars this already exists in the form of smileys.
➜ Look out for each other	Nice idea to use actors, the concept is sympathetic.	- Can also cause dangerous situations and irritations. - It is likely that not enough people will be reached during the pilot period.
➜ Slow Bike Area with Led Signal Signs	- Good idea to warn of dangerous traffic zones. - In a slightly different form, this idea may hold promise. For example, give cyclists a recommended speed at 100 meters before the intersection.	- There are already enough traffic signs, so an extra sign will have little effect. - The combination with an intersection does not seem very logical.

➜ Speed-Bar	Good idea. It can have an effect, but then it has to be implemented very extensively.	- Not feasible within this pilot. - Difficult to understand and an additional distraction for other road users.
➜ Welcome to the Cycle Path	Original idea, the mindset based on 'experiences' is nice.	We actually don't need more, but less obstacles and distractions to enjoy the city.
➜ Co-cycling: resocialisation through comical intervention	- Nice and original idea, well thought out. - Making people aware is good.	- The effect of this intervention probably won't last long. - This probably won't work during rush hour.
➜ Amsterdam plat	- Original idea, good to remove obstacles.	- Not feasible in terms of time and costs in the pilot. - Elements of this proposal are already policy.
➜ A Tailor-Made Solution	Many different, creative ideas.	- Large collection of large and small interventions whose individual impact is not clear. - Not feasible in terms of time and costs.
➜ Smart Speed Recommendations for non-motorized vehicles	Interesting idea that requires more elaboration.	It is already known where most accidents occur. Generating data will not be a solution to this.
➜ Stay calm and enjoy the ride	Lots of good ideas related to cycling policy.	The ideas remain very general and are insufficiently developed. Moreover, many of these ideas are already being implemented.
➜ Implanting Rubber mats on cycle paths	A very original way of speed reduction	- Not feasible and achievable - Cycling comfort and fun are hindered by this measure - This can lead to dangerous situations - Rubber mats are not durable

Some last words

The winner is determined! And now?

Many ideas focused on part of the problem and focused on the boundaries of the current cycle path, data, campaigns, or technological solutions. As stated before: the winning idea offers a more integrated solution and therefore stimulates thinking. But that also leads to a challenge: How do we proceed with this idea? Because not everything is possible within policy and legislation. We, therefore, want to challenge the prize winner to further develop his idea together with the Municipality of Amsterdam and Amsterdam Transport Region, with two perspectives at base: thinking (policy level) and subsequently doing (in practice). We will get this started by a presentation and brainstorm about the next steps in the 'ABC Stuurgroep' in April or May 2022.

The winner will receive a cash prize of €2,000 and will be given the opportunity to develop the idea in collaboration with the Municipality of Amsterdam and the Amsterdam Transport Region with a maximum development budget of €45,000. It is expected that developing this idea and carrying out the experiment will yield a great deal of new knowledge about road safety. Perhaps the idea can be applied in the city in the future. We will use our Amsterdam Bike City Platform to keep our community posted.

Stay tuned: more labs coming up...

All ideas - varying from big to small - were welcome. An extensive plan can make a big difference at once, while a small project can be adequately tested and applied more widely. It was important that the entrants properly substantiated how they made safer with themselves and the traffic situation.

Many submissions targeted technical solutions to security problems. Many solutions also considered the use of data and apps to promote bicycle safety. Several entries were aimed at splitting up road users based on speed or entering speed limits. In short: a wide variety of ideas! The jury preferred relatively 'simple' ideas. The number of ideas that have to do with apps and data indicates that the creators are future-oriented. In the future, these ideas will certainly play a major role. At the moment, however, the question is to what extent it is desirable as a municipality to collect data from citizens. It would possibly make governmental organisations dependent of big data to solve issues in the design of our cities. To what extent is this desirable? The feasibility of many ideas within a test period of one year does not seem feasible, although the ideas are well thought out in terms of content. There have also been ideas that have come up with solutions aimed at private individuals and over which the municipality has little influence. These are ideas that have the potential to be further developed within other organizations.

There were also some submissions which targeted especially only on cyclists or even on vulnerable cyclists. This raises questions about cause and effect and on perpetrator and victim: Who causes this problem and who should adapt to get it solved?

More innovation labs will be organized in the future, of course focused on a different theme. Everyone is invited to come up with new solutions within that theme! Until then, all interested parties can stay informed via the Amsterdam Bike City website and LinkedIn page.