HANDBOOK
Introduction

BETAPITCH is proud to partner with the Toyota Mobility Foundation to bring you the Accessible Transport for Berlin Challenge

This challenge seeks startups with innovative solutions that will improve Berlin's & Potsdam's public transportation systems. The innovations should improve the lives of people with reduced mobility such as the disabled, elderly or visually-impaired and enable them to move more freely within the city.

This is not your regular startup competition. It's a collaboration with Berlin's & Potsdam's major transport providers to test and potentially implement your smart city solutions. We're partnering with our infrastructure partners - Deutsche Bahn (DB), Berliner Verkehrsbetriebe (BVG), Verkehrsverbund Berlin-Brandenburg (VBB) and Verkehrsbetrieb Potsdam (ViP), who will be providing real-life case studies and subsequent implementation opportunities for startups to develop their ideas and make Berlin & Potsdam more inclusive and accessible for everyone. All participating solutions will moreover be evaluated by aggrieved parties.

TOYOTA MOBILITY FOUNDATION
BERLIN OFFICE I Krausenstrasse 8 I D-10117 Berlin

BETAHAUS X
betahaus GmbH & Co. KG
Sitz: Berlin, AG Tempelhof-Kreuzberg, HRA: 42440,
Komplementärin: betahaus Verwaltungsgesellschaft mbH,
Sitz: Berlin, AG Tempelhof-Kreuzberg, HRB: 118714
Geschäftsführer: Christoph Fahle, Maximilian v. d. Ahé,
Madeleine Gummer v. Mohl, St.-Nr.: 30/161/06722

HANDBOOK
Our Vision

We want a world where every human has the independence and freedom to move.

A world where cities are reimagined and reconnected with inclusive design.

A world where built environments are more accessible to all people, regardless of age or disability.

We want a world where we can help bridge the gap for everyone with reduced mobility.

The idea of making Berlin's & Potsdam's more accessible to everyone is an ambitious goal but one we want to embrace on a global scale. We believe it's crucial to start now and explore how to develop and implement solutions that help people become more independent during their travel from door-to-door.

The Accessible Transport for Berlin Challenge pulls together the greatest ideas, startups, key experts and infrastructure partners to imagine, create and develop new innovations that will break down the barriers to independence and make transport and cities more accessible.

Shape the future of Berlin's & Potsdam's public transport system

Berlin is a melting pot of cultures. It has a reputation as an artist's paradise, a thriving tech ecosystem, and is a vibrant destination for tourists. These are a few of the many reasons why Germany's capital continues to attract so many people.

The city is currently home to 3.6 million people and it is anticipated that this figure will significantly increase if the influx of people continues at its current rate. It's fundamental that Berlin addresses the mobility challenges that come with such emerging social and demographic changes, one being an ageing population. An ageing population subsequently comes with an increasing prevalence of persons with limited mobility, and/or those with visual, hearing and other impairments; all of which will depend on barrier-free access to stations, vehicles and stops.

HANDBOOK
Our Vision

It's clear that change won't happen overnight, however now is the time to begin building an integrated and tech-enabled state to help drive Berlin as an innovation leader and smart city.

Mobility for tomorrow and beyond

Digitalization, automation and new technologies are opening up unimagined possibilities. We want to leverage this knowledge to enable more connected and inclusive cities.

This is why we've partnered with Berlin's & Potsdam's major transport and infrastructure service providers who will share their real challenges and provide you an opportunity to apply your creative and innovative solutions.

TOYOTA MOBILITY FOUNDATION
BERLIN OFFICE I Krausenstrasse 8 I D-10117 Berlin

BETAHAUS X
betahaus GmbH & Co. KG
Sitz: Berlin, AG Tempelhof-Kreuzberg, HRA: 42440,
Komplementärin: betahaus Verwaltungsgesellschaft mbH,
Sitz: Berlin, AG Tempelhof-Kreuzberg, HRB: 118714
Geschäftsführer: Christoph Fahle, Maximilian v. d. Ahé,
Madeleine Gummer v. Mohl, St.-Nr.: 30/161/06722

HANDBOOK
Problem Statements

The Toyota Mobility Foundation & BETAPITCH are partnering with DB, BVG, VBB and ViP to seek innovative solutions that will improve Berlin's & Potsdam's public transportation systems.

These innovations should aim to help the lives of people with reduced mobility such as the disabled, elderly or visually-impaired to move around more freely within the city.

We want to optimize existing transport systems in Berlin & Potsdam, integrating technology to enable a seamless flow between the different services provided for residents, commuters and visitors.

The Accessible Transport for Berlin Challenge will focus on three key areas:

1. Hard Infrastructure
2. Multi-nodal; and
3. Navigation.

Find below how and why these are the key problem areas for Berlin's & Potsdam's transport system, in addition to some case studies from our infrastructure partners - DB, BVG, VBB and ViP.

We're seeking innovative solutions to reduce the frictions and/or break down the barriers that people with reduced mobility may experience whilst travelling door-to-door in Berlin & Potsdam. Your application should demonstrate the potential to solve one or more of these problems and help the lives of people with reduced mobility. Any evidence of previous application of your idea, service or product, and the potential of its future application will be favorable to support your application.

Hard Infrastructure: Optimize existing hard infrastructures with software and technologies to enhance accessibility

How can we optimize existing hard infrastructures (stations, vehicles, roads, buildings, public transport stops) so that the journey is more accessible for people with reduced mobility? Can we incorporate sensors and other relevant technologies to help enhance the infrastructural legacy the city holds? What solutions can be integrated into the public transport system to allow people with reduced mobility to travel with more independence?

HANDBOOK
Problem Statements

Case studies:
The height of train platforms are inconsistent so the gap between train and platform can vary and be a challenge for passengers with wheelchairs, strollers and limited mobility. A solution is needed to close the gap to more accessible travel.

In Potsdam, Verkehrsbetriebe Potsdam (ViP) operates three different types of buses which have varying entrances for wheelchairs and baby strollers. The entrances can be at the 2nd, 4th or 8th door and varies depending on the bus type and bus stop. With appropriate communication and informative tools, passengers could potentially board and disembark seamlessly and travel with less friction, delays and congestion.

Multi-Modal: Optimize planning and switching between multiple modes of transportation for a seamless journey

Berlin's transport system is made up of various modes of transport and service providers. How can we use the data to inform travelers about alternative journeys that meet their requirements?
Can we optimize the user journey with thoughtfully planned and guided journeys across the various operators, geographies and modes of transport? Can digital platforms and technologies be a virtual assistant that is dynamic enough to suggest alternative routes and send real-time updates on delays and maintenance work? Can it use open data whilst also ensuring privacy, security, and accountability?

Case study:
Some figures around Berlin Transport:

- The U-Bahn: nine lines with 173 stations
- The S-Bahn now comprises 15 routes with 166 stations
- There are 22 tram lines serving 377 tram stops
- There is a network of 149 daytime bus routes serving 2634 bus stops

How can a person with reduced mobility find the most optimal route to get from point A to B on any given time/day?

HANDBOOK
Problem Statements

Navigation: Enhance user journey with assistive technologies, incorporating user needs to suggest itinerary

Humans are unique and have different needs. How can we use available technologies and data to predict and/or identify the best routes to get from point A to B based on their reduced-mobility needs? Can software and hardware technologies be incorporated to infrastructure or wearables to give users more independence? How can we increase the performance and flexibility of the transport system whilst connecting the relevant people, systems and wireless network to make the journey door-to-door as frictionless as possible?

Case study:
New technologies, sensors and interventions could be integrated to optimise how passengers with limited mobility, optical and audible senses are informed and/or assisted. User journey could be seamless if passengers were aware of optimal points for entry/ exiting/ boarding and could navigate with independence.

TOYOTA MOBILITY FOUNDATION
BERLIN OFFICE I Krausenstrasse 8 I D-10117 Berlin

BETAHAUS X
betahaus GmbH & Co. KG
Sitz: Berlin, AG Tempelhof-Kreuzberg, HRA: 42440,
Komplementärin: betahaus Verwaltungsgesellschaft mbH,
Sitz: Berlin, AG Tempelhof-Kreuzberg, HRB: 118714
Geschäftsführer: Christoph Fahle, Maximilian v. d. Ahé,
Madeleine Gummer v. Mohl, St.-Nr.: 30/161/06722

HANDBOOK
Who's Who

Toyota Mobility Foundation

The Toyota Mobility Foundation was established in August 2014 to address urban transportation challenges and expand personal mobility for all people. The Foundation aims to inspire the next generation of mobility solutions by sharing Toyota's expertise in technology, safety, and the environment with partners at universities, governments, non-profit organizations, research institutions and other organizations to address mobility issues around the world.

www.toyotamobilityfoundation.org

betahausX

Betahaus X has 10 years experience in designing and delivering international startup competitions, hackathons, startup immersions and corporate accelerators. It is the daughter company of betahaus, one of Europe's first coworking spaces. Leveraging on community power and know how on building strong global communities, betahaus X provides access to communities and startup ecosystems, strategic design, scouting, and engagement for companies seeking to change and grow.

Betahaus X founded BETAPITCH, a global startup pitching competition that seeks to find the best startups in local ecosystems. In 2018, BETAPITCH competition was hosted in 12 cities by their respective local coworking and accelerator spaces. The winners are then brought to Berlin and connected to betahaus' global community of investors and corporates at Investors Day.

www.betahausx.com

Berliner Verkehrsbetriebe (BVG)

With more than one billion annual passenger journeys, BVG is the leading operator of public transport services in Berlin. About 14,600 employees of 55 nationalities keep Berlin moving day and night. Providing more than 90

HANDBOOK
Who's Who

years of experience in metro, tram, bus and ferry services, we are Berlin's partner in realizing mobility turnaround.

www.bvg.de/en

Deutsche Bahn (DB)

Deutsche Bahn offers global mobility and logistical services and operates in over 130 countries world-wide. In Europe, DB's trains and busses transport over 12 million passengers. DB moves both people and goods via their global networks of traffic and railway infrastructure, and extensive portfolio that includes air, rail and ocean freight.

www.deutschebahn.com/en

Verkehrsverbund Berlin-Brandenburg (VBB)

The VBB Verkehrsverbund Berlin-Brandenburg is the public transport authority covering the federal states of Berlin and Brandenburg – the entire capital area of Germany. The VBB can trace back its roots as far as to the German Unification Contract in 1990. The necessity to reconnect Berlin to the surrounding Brandenburg and to create a high-quality public transport were the reasons for introducing the VBB as a common public transport authority.

www.vbb.de/en

Verkehrsbetrieb Potsdam (ViP)

ViP Verkehrsbetrieb Potsdam GmbH operates the major part of public transport in Potsdam. The company is a subsidiary of Stadtwerke Potsdam GmbH. Today, the transport companies operate seven tram lines, 25 bus lines and a ferry connection as partners of the VBB.

www.bvg.de/en

HANDBOOK
The Challenge

The Accessible Transport for Berlin Challenge

This is an opportunity for startups and teams to develop a solution in collaboration with the Infrastructure partners to help make Berlin's & Potsdam's transport system more accessible for people with reduced mobility.

Startups will meet in Berlin for two days - one day for a briefing and training; one day to develop their solution and pitch to prizes.

Timeline and what to expect at each stage

Applications open
Startups and teams submit an online application with evidence to how they can provide value to the challenge - see eligibility criteria.

Applications reviewed - startups/teams shortlisted for challenge
Applications reviewed.
Startups and teams are shortlisted, interviewed and confirmed for the challenge. Up to 10 Startups will be selected to participate in Accessible Transport for Berlin Challenge.
Successful applicants must be available for two days in Berlin.

Berlin - Day 1: briefing and training
Shortlisted finalists will be in Berlin one day prior to the Accessible Transport for Berlin Challenge to be briefed on agenda and the issues to solve in the challenge.

The infrastructure partners DB, BVG, ViP and VBB will provide the issues.

Startups will receive pitch performance training and guidance on developing their pitch to include a coherent value proposition towards our partners.

HANDBOOK
The Challenge

Berlin - Day 2: Accessible Transport for Berlin Challenge
Development and pitch day
Startups and teams will develop a solution to one of the issues, then pitch and present their idea.

Participants will have networking opportunities and facilitated meetings with stakeholders within the mobility sector.

After the Accessible Transport for Berlin Challenge
Selected winning startups will develop their ideas further with infrastructure partners after the challenge.

Furthermore, we are a startup community and will be supporting the participants with know-how and connections within the BETAPITCH and betahaus innovator communities.

Grand prizes

Prizes for selected winners of the bootcamp.

Opportunity for Proof Of Concept (PoC) development with partners.
Opportunity to pitch at BETAPITCH Global 2019*

Cash Prizes:
€3000 each for two winners
€2000 each for third and fourth place
€1000 each for fifth and sixth place

**BETAPITCH Global 2019 - this is betahaus' flagship event which connects the betahaus startup community with its global network of investor and corporate partners. The winner will get another chance to pitch against the other global finalists for major prizes!*

HANDBOOK
Eligibility Criteria

From navigation to seamless communication to optimized platforms, the theme of accessible transport and mobility is broad. Whether it enhances navigation, planning or scheduling; supports more fulfilling interactions; or reduces the frictions currently faced by people with disabilities, we want to make transport more accessible across Berlin & Potsdam.

Solutions must include a software component

Your solution can be in a form of an app (native smartphone/ tablet/ web), digital platform, a software running on hardware or wearable technology, or a custom hardware which includes a software component.

Submitted solutions must focus on helping the lives of people with reduced mobility such as the disabled, elderly or visually-impaired to move around more freely within the city.

The solution must improve and/or optimize existing transport systems in Berlin and/or Potsdam (DB, BVG, VBB and ViP), integrating tech to enable a seamless flow between the different services provided for residents, commuters and visitors.

Solutions should address the hard infrastructure, multi-modal and navigation challenges that people with reduced mobility may experience whilst travelling door-to-door in Berlin and/or Potsdam. Some examples (though not limited to this) of what we're looking for:

- A digital platform that can plan and suggest door-to-door journeys that involve multiple transportation providers;
- A mobile app that uses indoor and outdoor positioning to guide a person to a barrier-free path to the precise desired location;
- Full integration into existing railway passenger apps to make getting on and off a train quick and possible without any barriers;
- Smart indoor and outdoor navigation signaling solutions.

HANDBOOK
Eligibility Criteria

Startup stage

Startups or teams with a prototype or already developed software solution.

The Challenge welcomes entries from teams and organizations.

Global entries

The Accessible Transport for Berlin Challenge is open to entrants from across the globe, however, their solution will be implemented in Berlin and/or Potsdam. All applicants must be at least 18 years old of the time of the entry (and the age of majority in the jurisdiction in which you reside).

Availability

To participate in the Accessible Transport for Berlin Challenge, applicants must be available to attend the following:

1. In-depth interview - online
   Shortlisted applicants will be invited to 1-2 online video interviews.
2. Briefing/training day - Berlin, in person
   There will be a briefing and training/mentoring session one day preceding the challenge day.
   1 or more representatives must be present in Berlin.
3. Accessible Transport for Berlin Challenge - Berlin, in person
   1 day in Berlin to develop the solution and compete in pitching ceremony.
   1 or more representatives must be present.
   If applicable, teams are responsible for arranging any visa arrangements. betahaus can provide documentation to assist with visa application, however, cannot guarantee the outcome of the application.
4. Developing the solution pilot
   Winning startups shall have the capacity to develop a pilot project in Berlin and/or Potsdam with the infrastructure partner(s).

Applicants must have an understanding of their solutions intended user case and be able to demonstrate how their solution is suitable for the infrastructure partner and problem.

HANDBOOK
Eligibility Criteria

Language

English is the official language of the challenge, all communication and entries must be made in English.

What applications will not be accepted

The Accessible Transport for Berlin Challenge will not accept applications nor support solutions that have the following agenda:

- Political intentions
- Promote religious activity
- Any activity that support or contributes to any criminal enterprise or anti-social forces

TOYOTA MOBILITY FOUNDATION
BERLIN OFFICE I Krausenstrasse 8 I D-10117 Berlin

BETAHAUS X
betahaus GmbH & Co. KG
Sitz: Berlin, AG Tempelhof-Kreuzberg, HRA: 42440,
Komplementärin: betahaus Verwaltungsgesellschaft mbH,
Sitz: Berlin, AG Tempelhof-Kreuzberg, HRB: 118714
Geschäftsführer: Christoph Fahle, Maximilian v. d. Ahé,
Madeleine Gummer v. Mohl, St.-Nr.: 30/161/06722

HANDBOOK
Evaluation Rounds

Applicants will be assessed and selected on the basis of their potential to excel in the Judging Criteria.

The Jury will consist of members from The Toyota Mobility Foundation, BETAPITCH, partners of the Accessible Transport for Berlin Challenge, and external experts.

There will be 3 evaluation rounds as follows:

1. Screening of online submitted written application.
   The Jury will screen and shortlist applications.
   Applications will be judged on their potential to deliver impact for users (people with reduced mobility). The solution also considers how the user will use the solution with the existing solutions for infrastructure partners (DB, BVG, VBB and ViP).
   Application should provide any evidence of previous application of their idea, service or product to support their submission.

2. In-depth online interview with selected applications.
   Shortlisted applications will be invited to 1 online video interview.
   The interview will be led by BETAPITCH lead scouts and supported by external experts. After all interviews have been completed, the interviewers will present the outcomes to infrastructure partners and then create a list of finalists to be invited to Berlin. Up to 10 Startups will be invited to Berlin.

3. In person at the Accessible Transport for Berlin Challenge in Berlin
   All finalists will hold a 5 minute pitch presentation on stage followed by a 3 minute Q&A session by the jury and experts. The finalists will be judged by the jury on the criteria below.

HANDBOOK
Judging Criteria

This is the criteria for the pitch presentation for the Accessible Transport for Berlin Challenge.

The information below should help entrants understand the judges' expectations

Criterion 1: Innovation

The solution is innovative and original.

The applicant should demonstrate how their solution:

- Is unique or more innovative than existing products on the market;
- Level of improvement in lives of users;
- How solution delivers improvements in the user's mobility and independence.

Criterion 2: Customer validation

The solution delivers potential impact for users (people with reduced mobility). The solution also considers how the user will use the solution with the existing solutions for infrastructure partners (DB, BVG, VBB and ViP). It improves users' independence, and/or reduces frictions and barriers that they experience.

The applicant should demonstrate:

- A real understanding of the wants and needs of users in relation to existing solutions on the market;
- The applicant should demonstrate their view of how their solution would work within existing infrastructure and a strategy for further development and test;
- The extent to how their solution will be validated and/or co-created with users.

HANDBOOK
Judging Criteria

Criterion 3: Market potential & Use Case with infrastructure partner	The Applicant should prove the market for the solution and proposal for use case with one or multiple infrastructure partners. Here the applicant maps out existing solutions on the market and possibilities for entry for the applicant's solution. The use case proposals should present the opportunity and investment from infrastructure partner's side.
Criterion 4: Product & Technology	The applicant should present how does the product solve the problem in a clear and concise manner in which the jury can easily understand. This includes visuals, tech specification, requirements for implementation.,..
Criterion 5: Team	The solution will be executed by a team which should present their background, experiences and qualification to show jury, why they are the right people for doing this.

HANDBOOK
Key Dates

Timeline

Applications open
January 21, 2019

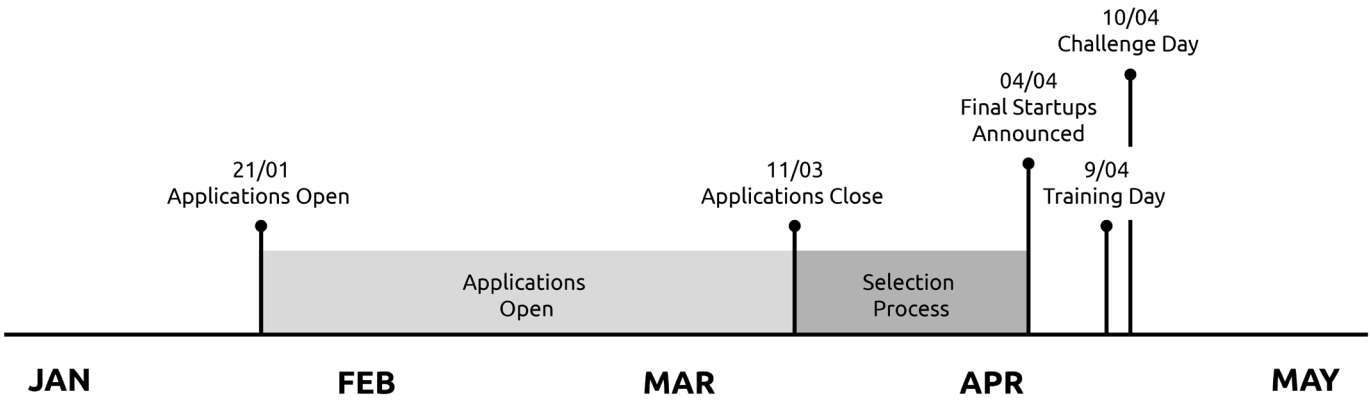
Applications close
March 11, 2019 - Deadline 23:59 CET

Application assessment and interview period for shortlisted startups
March 11 - April 04, 2019

Final startups announced
April 04, 2019

Briefing and training day, Berlin - Day 1
April 09, 2019

Accessible Transport for Berlin Challenge, Berlin - Day 2
April 10, 2019



TOYOTA MOBILITY FOUNDATION
BERLIN OFFICE I Krausenstrasse 8 I D-10117 Berlin

BETAHAUS X
betahaus GmbH & Co. KG
Sitz: Berlin, AG Tempelhof-Kreuzberg, HRA: 42440,
Komplementärin: betahaus Verwaltungsgesellschaft mbH,
Sitz: Berlin, AG Tempelhof-Kreuzberg, HRB: 118714
Geschäftsführer: Christoph Fahle, Maximilian v. d. Ahé,
Madeleine Gummer v. Mohl, St.-Nr.: 30/161/06722

HANDBOOK
FAQs

Why should I join the Accessible Transport for Berlin Challenge?

This is not your regular startup competition.

5 reasons why you should register:

1. Work with Berlin's & Potsdam's major transport providers
2. Opportunity to develop your solution and pilot it with our Infrastructure partners - make a REAL IMPACT
3. Apply your problem solving and creativity to make Berlin & Potsdam into a more accessible, connected and smarter city
4. Mentoring and training from field experts and coaches - perfect your pitch and gain valuable experience
5. Meet exciting people and be inspired

How do I register for the challenge?

1. Read this handbook to confirm you meet all the eligibility requirements
2. Register your team/startup via our online application form.
3. Fill in application, this will require:
   - Information about your startup
   - Examples of your solution, evidence of previous application of your product/service, and the potential of future application to solve mobility challenge vertical
   - Video to describe your solution for the challenge
   - You can save your entry and come back to it later using the same registration details.
4. Submit your application before deadline **(The deadline for entries is 23:59 CET on the 11 March 2019)**

Does it cost anything to register?

No, registration is free

HANDBOOK
FAQs

Are travel costs reimbursed?

Teams invited to Berlin will be reimbursed up to 400 euro for their travel costs.

How do I know I've been picked?

Shortlisted applications will be interviewed before their participation is confirmed for the Accessible Transport for Berlin Challenge pitch event.

Shortlisted applications will be receive communication that confirms their acceptance and participation in the Accessible Transport for Berlin Challenge pitch event.

Please refer to timeline for **Key Dates**.

Intellectual Property

Participants taking part in Competition declare that they have sufficient ownership of intellectual property rights (trademarks, etc), programs and/or content included in their proposals, declaring through the acceptance of this Legal Notice that they do not infringe on any intellectual property right or any other rights that any third party may hold in Germany, the European Union, or abroad regarding the contents and exempting organizers of Competition from any liability regarding the use of the above-mentioned programs and/or content. Please note well that the startup's intellectual property must be used for the public benefit. For more information on Intellectual Property refer to Terms and Conditions.

As part of the Accessible Transport for Berlin Challenge, BETAPITCH, Toyota Mobility Foundation, and the Accessible Transport for Berlin Challenge partners, intends to carry out publicity activity as well as publish research about the insights gained through the Accessible Transport for Berlin Challenge. These activities will not divulge information relating to Intellectual Property in the public domain.

HANDBOOK
FAQs

Does the Toyota Mobility Foundation get to keep my IP?

No. There are a few things to point out here. The first is that any IP generated from The Challenge is for the public benefit. And any IP you enter The Challenge with remains yours. Toyota Mobility Foundation has a right to use the IP you generate during the period of The Challenge and the content of your submission to The Challenge.

But here's the reality. Our goal is to have the best ideas be worked on collaboratively with the implementation partners. Your IP, their companies, with the focus on the public interest. So, no one is taking your IP but, rather, we all want to see the best ideas succeed.

Still have a question?

If you've read the handbook and you still have questions, contact the team at *x@betahaus.de*.