

Visions for Urban Mobility

A strategic guide for
mobility transformation



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Five guiding principles for successful mobility visions

The transformation to sustainable mobility is both a necessity and an opportunity. It is necessary for combating climate change, which calls for carbon-neutral mobility. At the same time, it offers the opportunity to reclaim urban public space for people and thereby make cities more livable.

In this paper, we try to answer the question of how to make this transformation succeed. First and foremost, we need to move on from the difficult years in which COVID-19 dominated many aspects of life. We witnessed a few positive mobility trends during the pandemic, particularly with respect to cycling. However, these were overshadowed by other worrying developments, such as a re-orientation toward the private car and the struggles of many public transport operators to win back customers.

Therefore, we believe that fresh impetus is needed to push the sustainable transformation of mobility further. We need to build on the positive developments that happened during the last two years, and we have to reverse the negative ones with bold moves and new ideas.

The good news is that we are not starting from scratch. Cities such as Paris, Copenhagen, Amsterdam, and Vienna already show us that a more sustainable, approachable, and human-centric mobility is possible. Indeed, we found many other places from which we can learn about transforming mobility, and we interviewed visionaries from more than 60 pioneering cities in Germany, other parts of Europe, and other regions of the world. In this paper, we share their insights and success stories.

How visions work: Alignment, Focus, and Resilience

Our core argument is that we need ambitious and well-designed visions to re-start the transformation of mobility after COVID-19. In our view, visions are intrinsically strategic. A vision is a positive image of the future that portrays how people move around in a city and how public space is used. However, a vision is not just a pretty picture of what the world could look like. Made right, it can become an effective governance tool that fulfills three essential functions:

- **A vision aligns stakeholders** in the quest of working toward a shared goal. It does so by creating consensus early on in a transformation process and by allowing planners and stakeholders to constantly tie difficult discussions over detail back to a shared, overall goal.
- **A vision focuses resources** in terms of funding, personnel, and management attention. It does so by serving as a constant reminder of what is important and what is not.
- **A vision increases resilience** in the face of unforeseen obstacles and disruptions. It does so by providing a clear path through uncertain times and by making the transformation of mobility a key interest of a variety of stakeholders rather than of only a few.

With whom we spoke: more than 60 pioneering cities from around the world

In our conversations, we focused on what a vision needs to fulfill these three functions. What all of our more than 60 interview cases have in common is that they created and implemented successful mobility visions.

Of our interviewees, 8% represent cities in Germany, and 69% represent cities in other European countries. Furthermore, 19% of our cities provided us with insights from the Americas and 3% from Australia and New Zealand.

In terms of size, the cities we interviewed ranged from 30,000 (Rethymno, Greece) to 13 million inhabitants (Greater Buenos Aires, Argentina). Overall, 40% of the cities we

interviewed had below 500,000 inhabitants. Roughly a quarter of cases ranged between 500,000 and one million people. Finally, more than a third of all interviewees represented cities of over a million inhabitants. The diversity of these cities shows that visions can work no matter how large a town, city, or metropolitan area is.

Finally, in most cases we interviewed the core team directly involved in vision development (78% of interviewees). In the remaining cases (22%), our interviewees joined the city's attempt to transform mobility later. Nevertheless, all of our interviewees worked on implementing their visions.

How to make visions successful: five guiding principles

In our interviews, we encountered a host of impressive and inspiring stories. In this paper, we will present those that we found particularly instructive. Even though not all cities are presented as examples, their shared insights were key in distilling the following five guiding principles for making visions successful in aligning stakeholders, focusing resources, and creating resilience. These five principles will structure the following chapters, each of which will be further elaborated by means of four sub-themes that detail how to implement the respective principle.

Taken together, these principles represent the best practices and key insights of more than 60 visionary cities worldwide. With this collection, we hope to spark motivation for as well as confidence in pushing the sustainable transformation of mobility forward in many more settings.

1

Build an ambitious story that puts people at the center

- 1.1 Be bold
- 1.2 Think from the outside in
- 1.3 Start from the future
- 1.4 Put people at the center

4

Transform your vision into a living strategy

- 4.1 Break your vision down into an action plan
- 4.2 Make your vision measurable and visualize progress
- 4.3 Kick things off with purpose
- 4.4 Act decisively and stay flexible

2

Engage the right stakeholders at the right time

- 2.1 Get a clear picture of whom you are dealing with first
- 2.2 Build a strong team, and pick a champion for driving the process
- 2.3 Build momentum by winning over potential veto players
- 2.4 Plant the seeds for long-term change by activating partners

5

Use your vision to unlock financial resources

- 5.1 Highlight the positive externalities of your vision
- 5.2 Place the vision at the core of your funding strategy
- 5.3 Leverage the vision in local funding allocation
- 5.4 Work with your stakeholders to make your vision a reality

3

Use public engagement to build a city movement

- 3.1 Design an approach that reaches people “beyond the usual suspects”
- 3.2 Pick the right time for engaging with the public
- 3.3 Push past conflict through transparency and piloting
- 3.4 Turn public engagement into a self-reinforcing driver of transformation

We have talked to over 60 vision developers from around the world



Europe

Amsterdam, Antwerp, Augsburg, Barcelona, Berlin, Bilbao, Birmingham, Bologna, Bristol, Brno, Brussels, Budapest, Copenhagen, Denmark (Capital Region), Gdansk, Ghent, Gothenburg, Hamburg, Helsinki, Houten, Jaworzno, Kaunas, Krakow, Krusevac, Leeds, Lisbon, London, Malmö, Manchester, Milano, Mulhouse, Munich, Odense, Paris, Pontevedra, Rethymno, Rotterdam, Sevilla, Sofia, Stuttgart, Tallinn, Thessaloniki, Turku, Utrecht, Vienna, Vitoria, Wroclaw, Zurich

North America

Boston, Detroit, Edmonton, Hamilton, Los Angeles, Pittsburgh, Seattle

South America

Buenos Aires, Cuenca (Ecuador), Curitiba, Medellín, Sao Paulo

24%
500.000 –
1 million



40%
< 500.000

36%
> 1 million

22%
Involved in vision
implementation



78%
Part of vision
development team

1. Build an ambitious story that puts people at the center

A well-designed vision can become a catalyst for change. But how to design a vision well? Our interview partners suggested four key aspects:

- Be bold
- Think from the outside in
- Start from the future
- Put people at the center

1.1 Be bold

Urban mobility plans often build on a well-known formula: build on experience and perhaps aim a bit higher than the trend line. However, if we aim for real change, such evolutionary thinking will not do the trick. Henrik Falk, CEO of Hamburg's largest public transport operator Hamburger Hochbahn, shared the following perspective with us: "When pushing for real change, you need to throw the ball far away. It needs to land clearly outside of existing ways of thinking and organizational logic." The latter, Falk argues, are often unprepared to facilitate sufficiently bold thinking.

Indeed, our research shows that bold thinking pays off. In Hamburg, boldness took the form of the so-called "Hamburg-Takt" (Hamburg

Headway), the promise that, by 2030, every person in Hamburg should have a high-quality public mobility offer available within five minutes. The "Hamburg-Takt" contributed significantly to Peter Tschentscher's successful re-election campaign for mayor in 2020.

“You need to throw the ball far away. It needs to land clearly outside of existing ways of thinking and organizational logic.”

Henrik Falk
CEO of Hamburger Hochbahn

We find a similar example in Paris, France, where the "15-minute City Concept" has become a source of pride for Parisians and an internationally recognized best practice. It was also key to Anne Hidalgo's re-election as mayor. According to Carlos Moreno, professor at the Sorbonne in Paris and originator of the concept, the "15-minute City" proposes an entirely new urban lifestyle." At the same time, Moreno continued, "many people thought that

it would be impossible to apply it in reality.” Clara Fayard, the then Chief of Staff on the “15-minute City” at the Paris City Hall, seconds this assessment: “taking up the „15-minute City“ was a bold move”. Nevertheless, she elaborated in our interview, it was precisely this boldness and the way in which the concept empowered people that created momentum. This momentum was essential in making the “15-minute City Concept” a success.

So, but how does one throw the metaphorical ball far enough? In our interviews, we identified two primary ways of accomplishing this.

1.2 Think from the outside in

The first is to think from the outside in by using best practices. Those who strive to transform urban mobility are not alone. A systematic best practice analysis done at the beginning of the vision development process can thus significantly expand the horizon of what is possible.

In searching for best practices, many cities got in touch directly with those responsible for initiatives of interest. One example is how the Transport for Greater Manchester (TfGM) team in the United Kingdom approached

best practice research in the context of their Greater Manchester Transport Strategy 2040. Besides taking this research seriously, the team directly approached vision developers from London. “We worked quite closely with the people from London’s Healthy

Streets, and we got a lot of support from Lucy Saunders [Director at Healthy Streets]. Understanding how she turned that vision into policy and brought it to fruition has been especially useful for us,” Nicola Kane, TfGM’s Head of Strategic Planning, Insight, and Innovation, explains.

Best practices do not only show how urban spaces might look. When considering how they came into being, they also prove that it pays off to challenge the status quo. This insight was brought to us by Paul Foster, Transport Strategy Expert from the City Council in Leeds, United Kingdom, who stressed, “oh yes, you get those responses like, ‘that’s not Leeds.’ But, you know, Amsterdam wasn’t Amsterdam 30 years ago.” It is essential, so he argues, to communicate that those cities everyone looks up to today also had to make change happen first.

Indeed, the fact that measures have been implemented successfully in other places can help to spur local change. The City of Edmonton, Canada, for example, had faced a consistently high number of traffic accidents and traffic-related injuries and fatalities for roughly a decade. There was an understanding among the city council and administration that this was both unacceptable as well as avoidable. It was ultimately the introduction of “Vision Zero” in 2015 that generated political momentum to transform the recognition of a problem into a concrete and actionable strategy—the Road Safety Strategy 2016-2020. As Jessica Lamarre, the city’s Director of Safe Mobility, told us, “Vision Zero is an internationally-recognized goal, and it is already well evidenced.”

Finally, best practice analysis does not need to consume excessive resources. Smaller cities have also undertaken them in their vision development processes. When formulating the



TfGM is coordinating transport services in Greater Manchester

first Sustainable Urban Mobility Plan (SUMP) in Greece (implemented since 2009), Rethymno, a city of roughly 30,000 inhabitants, leveraged existing resources by joining the CIVITAS initiative “SUMPs-UP”. Vasilis Myriokefalitakis, advisor to the city’s mayor points out: “A few years ago, it was very difficult to get information about best practices, but nowadays it is readily available online. If you want, it is there.”

1.3 Start from the future

The second way of throwing the metaphorical ball far enough is to expand your time horizon and think from the future. Instead of asking, “how much can we change each year?”, this requires a different question: “**how do we imagine the future?**” Only after a positive image of the future has been formulated is it time to ask: “how do we get there?” Such backcasting (as opposed to forecasting) has a substantial effect on the formulation of a strategy: It ensures that concrete measures adapt to the actual goal rather than the other way around.

Iva Rorečková, Head of the Transport Development Policy and Strategy Division in the City Municipality of Brno, Czech Republic, introduced us to how Brno kick-started their strategy development process along these lines. Her team had experts develop five different mobility visions, which were subsequently introduced to key stakeholders in the city, including the mayor and deputy mayors. Rorečková’s team used the results to begin a five-month engagement process, at the end of which the favored vision was presented to and approved by the city council. Only then did the work begin of breaking it down into a concrete strategy and action plan.

When thinking from the future, it is key to choose an adequate time horizon. The case of Utrecht, Netherlands, shows that pushing for longer time horizons can offer greater flexibility in transport and mobility planning. When we talked to Mark Degenkamp, former Strategic Mobility Advisor to the Utrecht Local Council, he shared the story of Utrecht’s Mobility Plan 2014-2030 (later extended to 2040). As he recalls, initially the deputy mayor had in mind a time horizon of 2025. However, Degenkamp and his colleagues managed to convince the deputy mayor to expand the strategy’s horizon further into the future: 2030, but implicitly setting the stage for a longer period. This, Degenkamp recalls, gave the team the opportunity to think bigger and more holistically. “Big things like tram lines take time.”



The Utrecht Local Council expanded their strategy's time horizon further into the future

Of the cities we interviewed, it was Pittsburgh, in the US state of Pennsylvania, that pushed this idea the furthest in setting 2070 as the time horizon for their strategy “Mobility in a Sustainable Pittsburgh”. As Karina Ricks, the city’s Director of Mobility and Infrastructure, stated: “we chose 2070 as our target date, because this plan is for the next generation.” For her, a 50-year time horizon had an essential advantage: “it puts things into perspective. People are more willing to participate and think openly about the future rather than about today’s problems.”

While creating space for new ideas, however, long time horizons also introduce the challenge of increased uncertainty about how the world will develop. Tallinn, Estonia, experienced this firsthand. In 2018/19, the city created a 2050 roadmap. In 2021, however, they reduced their planning horizon to 2035 as a reaction to the COVID-19 pandemic as well as the outcomes of several tests with their own self-driving buses, as the city’s Head of Smart Mobility Jaagup Ainsalu shared with us.

Ultimately, the time horizon should be determined by three major considerations: the amount of time necessary to change the infrastructure in focus, the degree to which the time horizon allows people to set aside today’s challenges and focus on the future, and, finally, the degree of future uncertainty that planners might have to manage in a specific topic area. For additional insight on how to handle this uncertainty, see Chapter 4 (“Transform your vision into a living strategy”).

1.4 Put people at the center

Finally, our interview partners shared a fourth essential insight about formulating ambitious visions: **put people at the center!** Avoid technical language in communication with the

public and phrase your vision in a way that connects to people’s everyday life.

“You can have a great idea, but if you don’t communicate it well, people won’t engage with it.”

Ariadne Daher
Partner in the architectural
firm of Jaime Lerner

The launch of the world’s first bus rapid transit (BRT) system in Curitiba, Brazil, presents a glowing example in this regard. Ariadne Daher was a close associate of Jaime Lerner, Curitiba’s former mayor and inventor of the BRT concept. She explains, “communication is key. You can have a great idea, but if you don’t communicate it well, people won’t engage with it.” This insight was heeded when introducing the BRT system to the public. As Daher recalls, the dignity brought by access to quality public transportation was the core message: “Buses are not for poor people. They are the best, they are wonderful, they are avant-garde, and they help you and the planet.”

The Mayor’s Transport Strategy of 2018 in London, United Kingdom, provides us with another example of how to put people at the center. Transport planners relied on what became known as the “Healthy Streets Approach” when developing the strategy. As Mike Keegan, Transport Planning Manager at Transport for London, told us, they placed the question “how does our vision impact the individual?” at the heart of their approach. “We moved from being ‘engineery’ to being relatable, from talking about capacity and frequencies to talking about travel experience.”

The strategy's major concern was mode shift. However, in formulating their approach, they tied mode shift back to tangible outcomes, such as improved air quality, safer streets, and overall quality of life. The effect, Keegan highlights, was remarkable: "what

we found is that people who weren't initially supportive of mode shift couldn't argue against having safer streets or having clean air for their children to breathe.

The vast majority of stakeholders supported even our most contentious proposals like the one to further develop London's road user charging policy."



„Places to stop and rest“ is one of ten Healthy Street Indicators

“ We moved from being ‘engineery’ to being relatable, from talking about capacity and frequencies to talking about travel experience. ”

Mike Keegan
Transport Planning Manager at
Transport for London

The example of London, just as the previously mentioned cases from Hamburg and Paris, convey a further insight for staying close to the people: **keep it simple**. Ultimately, it is an art to boil your ambition down to a memorable and easily understood vision statement. “15-minute City”, “Hamburg-Takt”, “Healthy Streets” – say no more.

2. Engage the right stakeholders at the right time

When we say stakeholders, we mean actors (institutions, groups, and key individuals) that have an interest in as well as the power to shape the mobility agenda in a city. Major stakeholders in urban mobility are typically the city or regional government and legislative body, its administration (e.g., urban planning and transport departments) and transport companies. Civil society groups and industry associations constitute further important stakeholders.

A vision can only be realized when it is shared widely within a city. Engaging stakeholders is thus essential for success. When doing so, keep in mind four things:

- Get a clear picture of whom you are dealing with first
- Build a strong team, and pick a champion for driving the process
- Build momentum by winning over potential veto players
- Plant the seeds for long-term change by activating partners

2.1 Get a clear picture of whom you are dealing with first

Who is important for the formulation, elaboration and implementation of a vision? Our conversations suggest that it helps to start stakeholder engagement by asking this question explicitly and early on. Although we will name exemplary actors in this section, keep in mind that stakeholder landscapes can vary greatly depending on local circumstances. Depending on the goal and scope of a vision—as well as the local governance structure and specific individuals—it may well turn out that certain obvious players have comparatively little influence while less visible players hold great degrees of power.

Following this approach, stakeholders generally fall into one of three concentric circles. At the core we find **vision drivers**. Drivers push the vision forward politically, in the media, and on a conceptual or operational level. They include the core vision team and champions (see on the following page).

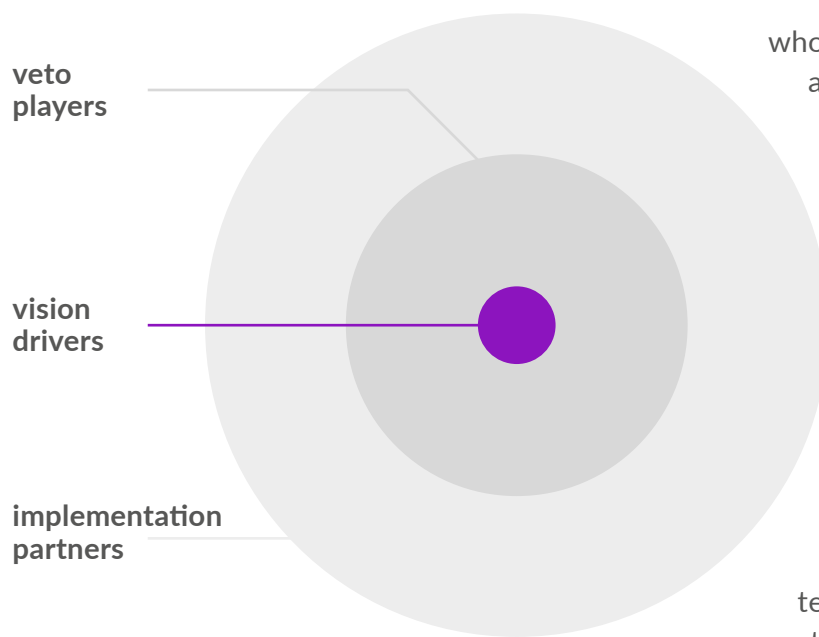


Figure 1:
Three kinds of key stakeholders

The second circle contains **potential veto players**, meaning those actors that have the power to let the vision and consecutive strategy fail. It is nearly impossible to establish a shared vision—let alone a holistic strategy for sustainable transformation—against the will of these players. A city’s mayor (if they are not among the drivers themselves) naturally falls into this category. Other examples could consist of the public transport operator’s leadership or certain city officials. Importantly, naming this group veto players means that they could veto the vision, but by no means do they have to. Indeed, winning these actors over on your vision is a powerful tool for creating a movement around it.

A third group of actors consists of **implementation partners**, meaning those who apply the vision and the associated strategy in their day-to-day work. This third group includes specific teams within administrations and public transport companies as well as additional actors such as city district governments and other mobility providers. After having clarified

whom to address in stakeholder management, it is time to explore tailored approaches for each of these groups.

2.2 Build a strong team, and pick your champion to drive the process

Drivers are essential for a vision’s success. Within our interviews, we found that there are two main types of drivers: the **core team** behind the vision and high-profile champions. The core team will put the work, passion, and creativity into the process that brings the vision to life. Staffing the right team is crucial. The case of the Stuttgart “Transport Plan for 2030” shows how passion can make a difference. In our conversation with the head of the city’s Mobility Department, Wolfgang Forderer, we learned that one success factor in their projects “is that, within our huge administration, we are searching for those that are willing to put their energy into it. Regardless of hierarchy.” The effect, Forderer continues, is well worth the extra effort. “You have to do some scouting to find those people, but when you find them, things move better and faster.” It is a self-reinforcing process, because those you have brought together blossom in a team of like-minded people.

The case of Kraków, Poland, brings to light another important attribute of the core team: expertise. The city had strategically staffed local experts on European mobility projects. When setting out to formulate their “Transport Policy Kraków 2015-2025” as well as the subsequent SUMP, they were therefore able to draw on this expertise. “Most of the people in our team have experience in EU-funded projects,” explains Tomasz Zwoliński, Mobility Specialist at the Municipality of Kraków.

A committed core team can have a profound impact, which is exemplified in the case of Curitiba. The roots of the city's mobility strategy and its world-famous BRT system originate

in the city's master plan from the 1960s. At that

time, it was Jaime Lerner and his team that started pushing the implementation of sustainable and equitable mobility policies, which were sub-

sequently implemented during his first term as mayor. Their committed effort was essential for the

city's long-term transformation: "different parties and different mayors came along over time and yet they were able to ensure continuity." Lerner's associate Daher explains. "If a mayor from an opposition party wins, they normally want to reinvent everything. We were able to avoid this thanks to the infrastructure, institutions and the Master Plan. As the years went by, Lerner himself became the champion of Curitiba's mobility transformation.

Turning to **champions**, the previously mentioned cases of Hamburg, Paris, and London provide prime examples. In Hamburg and Paris, Mayors Tschentscher and Hidalgo were early co-creators or adopters of the "Hamburg Takt" and the "15-minute City", respectively, and made them core to their political campaigns. In London, Mayor Sadiq Kahn, initiated the Mayor's Transport Strategy and decided to put the "Healthy Streets" approach at the heart of this strategy.

To have a champion who stands up for the vision is truly beneficial, as the case of Filip Watteeuw shows. As Deputy Mayor of Ghent, Belgium, he championed the city's Circulation Plan, which was designed to keep private cars out of the city center, thereby improving the attractiveness of sustainable mobility. A first sketch of the plan was drafted in October 2014, and implementation began in April 2017. In the meantime, Watteeuw "was out every evening somewhere in Ghent," he recalls. "I joined hundreds of debates with residents to talk about the vision. It was a lot of work, especially because we had rough debates."

The plan became increasingly intertwined with Watteeuw's personal career. "In 2014, everyone was uncertain whether the Circulation Plan would work out. In politics that's very important, because if it failed, it would be the end of my political career." However, the effort paid off: after implementation, cycling in the city center increased by 25%, and bike trips to and from the city center grew by 35%. Public transport use increased by 8% during the day and by 28% in the evening. At the same time, car traffic fell, as did traffic jams. "People started changing their habits and congratulating me – I couldn't believe it," Watteeuw remembers.

While these stories show how powerful it is to have a champion, the association with a specific individual also bears certain risks. For example, if a champion were to resign due to a political scandal, the vision may lose support and ultimately be suppressed. To prevent such an incident, it is essential to muster broad support for a vision early on. With this said, we turn from drivers to potential veto players.



Curitiba's BRT system is a crucial part of the Master Plan

2.3 Build momentum by winning over potential veto players

When approaching potential veto players, the goal is to transform the vision from an idea into a movement. An important point in winning them over is to **build on what exists**. This is particularly worthwhile in cities that already look back on previous plans and initiatives that have tried to boost sustainable mobility in one way or another. These plans should bring with them stakeholder consensus that can and should be leveraged for the newly formulated vision.

Karina Ricks, Director of Mobility and Infrastructure in Pittsburgh, highlighted this effect when she told us about their PGH 2070 Mobility Vision Plan: “Pittsburghers have already been thinking about mobility issues for a long time, and there are many good ideas that have come up over the last decades.” So when starting to formulate a vision for Pittsburgh in 2019, her team looked at all past plans that incorporated public participation. By leveraging these plans, Ricks highlights, they could legitimately argue that “you already told us your thoughts and ideas, and this is how they come together in a system.”

The City of Brussels, Belgium, also followed this path when formulating their “Good Move” mobility vision in 2016. “We did not start from scratch. We built on everything that was already there, assessing what was right and wrong”, explains Bruno van Loveren, Strategy and Programming Director at the Mobility Planning Authority in Brussels Capital Region. They combined this exercise with an insight already mentioned in the previous chapter: keep it simple. “We realized that previous versions of mobility plans were difficult to understand”, van Loveren recalls, “so we decided to go for a new approach that incorporated

what was already there but easier for people to relate to.” They took these existing inputs and distilled from them clearly formulated key challenges and goals for several sub-themes.

Beyond incorporating existing works, winning veto players means coming up with **tailored and well-timed strategies**, as the following examples indicate.

“ Thinking across city limits was a game changer! ”

Alessandro Delpiano
Director of Territorial and Mobility Planning at
the Metropolitan City of Bologna

In Bologna, Italy, for example, the city’s problems could only be solved by **including additional stakeholders** into the planning process. With around 390,000 inhabitants, Bologna is by far the largest of the 55 municipalities that make up the “Città Metropolitana di Bologna”. However, according to Alessandro Delpiano, the Director of Territorial and Mobility Planning of the Metropolitan City of Bologna, half of the cars inside the city were coming from other municipalities: “if you want to solve the problem of traffic jams in Bologna, you must deal with the other municipalities”, as he phrases it. Delpiano told us about initial difficulties in relaying this insight to the city council. With extra effort (and the evidence mentioned above) he managed to convince the city of a regional approach. Instead of designing transport policies for the City of Bologna alone, as they had been doing for many years, they subsequently managed to rethink the metropolitan area as an integrated whole. To enable collaboration for the SUMP, Delpiano helped set up a coordination system across municipalities. This system included, for

example, the Metropolitan Conference consisting of the mayors in the region, a scientific committee, and a planning board. The new approach came with additional coordination demands, and Delpiano highlights the need for further improvement. Nevertheless, as he highlights, “thinking across city limits was a game changer” for the city and the region alike.



Copenhagen's cycle superhighways make long distance bicycle commutes more comfortable

Another case related to neighboring territories shows how essential it is to **take stakeholder concerns seriously**: the cycle superhighways in greater Copenhagen, Denmark. The cycle superhighway project was initiated by the City of Copenhagen; however, its realization depended greatly on the collaboration of neighboring municipalities. Initially, these municipalities were suspicious. “We are not Copenhagen. If everything has to be to Copenhagen’s standard, we won’t participate.” These were the responses that Sidsel Birk Hjuler recalled during our conversation. She is the Head of the Cycle Superhighway Office that now facilitates the development of the cycle superhighway network across municipalities. In adapting to this situation, a former

colleague and project manager of Hjuler’s made sure everybody had their say in the development of the plan while holding back on the Copenhagen point of view. “I think this has been extremely important in getting the collaboration to really evolve. Things are very different outside the city limits of Copenhagen and you must understand that”, Hjuler told us.

Finally, a **step-by-step approach** often helps in winning over key stakeholders. The Stuttgart Mobility Department’s interaction with their city council shows how this can work. In a situation without a clear majority in the council, the department took extra care to inform policymakers early in the process. Department Head Wolfgang Forderer describes: “it is necessary to connect with decision makers early on. It’s about setting premises and making compromises.” Besides the usual work with technical committees and the council, they met up with policymakers in smaller groups to go into the details of their plans and bring in subject matter experts. Following Forderer, such efforts are especially important when dealing with legislative bodies, since many politicians lack the necessary technical background and mobility knowledge. “If informed in a tailored and timely manner, politicians [just as other potential veto players] can become vectors for your ideas, carrying the knowledge into their political camps.” For Forderer, this lays the groundwork for an evidence-based political debate.

“It is necessary to connect with decision makers early on. It’s about setting premises and making compromises.”

Wolfgang Forderer
Head of Stuttgart's Mobility Department

2.4 Plant the seeds for long-term change by activating partners

While implementation partners might not appear central when developing a vision, they will become increasingly important later when the vision is translated into action. It is therefore advisable to think about implementation from the start and to include implementation partners in your stakeholder management efforts. There are two kinds of such partners. A broad array of **external** partners, such as small business owners and activist groups, will exert influence on public opinion and are important for making the vision a reality in concrete local contexts. **Internal** partners, on the other hand, are those in the administration and in public companies who will be involved in executing the vision.

Regarding **external implementation partners**, many cities we talked to engaged in extensive work with stakeholders beyond their veto players. Their goal was to understand opinions, explain ideas, and uncover new insights. Most interview partners highlighted that the more stakeholders connect to a vision, the higher the chances that it will materialize.

Beyond these broad forms of stakeholder engagement, however, we want to highlight best practices that moved in activating implementation partners. One such example was presented to us by Martin Guit, Senior Advisor at the City of Rotterdam, Netherlands. In what they termed a “mobility arena”, Guit and team gathered a group of around 15 policymakers, entrepreneurs, citizens, and researchers who were involved in different modes of transportation, from shared mobility to water taxis. The arena was “not about fighting but talking”, Guit explains with a smile. Participants joined a series of workshops, developing a vision statement of how mobility can contribute

to a city that is healthy, vital, economically thriving, and attractive. With this approach “we changed the whole thinking about mobility and the mindset of the people involved”, Guit explains. The key is “that the vision can address several goals of the city. If you have a bigger cake, everyone can get a piece of it.” Since its inception in 2015, the mobility arena transformed into a much broader network and sparked several concrete projects. “It started with just the people in the arena, but they worked as ambassadors”, Guit summarizes the success of the arena.

In Paris, we saw similar strategies for activating stakeholders. After her first election in 2014, Anne Hidalgo delegated key responsibilities to Paris’s districts (arrondissements) which, in turn, engaged and activated a broad array of implementation partners. The districts played an important role, for example, in the execution of the city’s new public participatory budget. Furthermore, these district administrations were given a more active role in implementing the “15-minute City Concept”.

When considering how to win over **internal implementation partners**, we are naturally brought to the topic of change management. The transformation of a city’s mobility and public space often means big changes for government institutions and public services. These organizations tend to look back on decades dominated by other ideas and paradigms, such as car-friendly city planning or the conviction that public transport is a basic governmental service rather than an integral and progressive part of the future of sustainable mobility. Therefore, these changes to the city also demand changes in the way these institutions think and act.

Besides the aforementioned activation of city districts (along with external implementation

partners), the Paris example offers another key insight: timing counts. Clara Fayard, then Chief of Staff on the “15-minute City” at the Paris City Hall, stresses this point when reflecting on the connection between their vision and the mayoral elections. “The elections were a way to mobilize people, particularly inside the City Hall. It was a moment where everybody sat around the table and thought about what to do for the next six years.” If there is a chance to create momentum through an external event, be it a crisis or an election, use it.

The Bulgarian capital city of Sofia provides another example of how to win internal implementation partners. Here, change management was incorporated into the development of “Vision Sofia 2050” from the very beginning. Vision development was led by Sofiaplan, a municipal enterprise responsible for the spatial and strategic planning of Sofia Municipality.

In forming their enterprise, they started out by working closely with supportive, high-ranking individuals. Kaloyan Karamitov, Urban Planning and Mobility Coordinator at Sofiaplan, remembers that they “found it easier to first stick with stakeholders, like deputy mayors, who are more passionate, progressive and collaborative.” This helped to activate the more skeptical stakeholders in the city administration. “When there is a real-life example, it is easier to gather more people around you.” Another success factor was to bring the administration into contact with external experts and stakeholders. Karamitov says, “we were able to show the city employees that all those

stakeholders were willing to work toward the vision we laid out.” Conversations with external stakeholders inspired and energized the administration. “The redevelopment of urban areas works really differently now compared to 10 years ago,” Karamitov states. “Even if the process took longer than initially anticipated, step by step we redefined different aspects of working together within the municipality.”

“Even if the process took longer than initially anticipated, step by step we redefined different aspects of working together within the municipality.”

Kaloyan Karamitov
Urban Planning and Mobility
Coordinator at Sofiaplan

A final example from Boston, in the US state of Massachusetts, shows the power of early, systematic engagement of implementation partners. When successful, the vision can become the new foundation of “mobility talk” in a city. It can give stakeholders a common vocabulary and focus for mobility planning. Vineet Gupta, Director of Planning in the Boston Transportation Department, explained that their “Go Boston 2030” vision „has sunk in with the people. It is really part of the transportation vocabulary in Boston today at the administration, in the agencies, and at the political level.”

3. Use public engagement to build a city movement

Transforming mobility is ultimately about making cities more livable. It is about reinvigorating public space, reducing traffic accidents, and increasing accessibility, as well as decreasing local pollution and the impact of global climate change. In doing so, it is essential to engage those who actually live in cities and their surroundings. When approaching public engagement, four central themes emerged from our conversations:

- Design an approach that reaches people “beyond the usual suspects”
- Pick the right time for engaging with the public
- Push past conflict through transparency and piloting
- Turn public engagement into a self-reinforcing driver of transformation

3.1 Design an approach that reaches people “beyond the usual suspects”

Different parts of society are organized to varying degrees. Interest groups—whether for barrier-free transport, for bicycle infrastructure, or against barriers to the private automobile—often present well-articulated arguments. While these groups tend to fill up

a substantial amount of space in public debate, many interviewees report challenges in engaging the more silent members of a city’s population, such as time constrained individuals, working parents, vulnerable populations, and younger people.

In our interviews, we discovered a variety of online and real world, written and interaction-based, city-wide and neighborhood-specific types of engagement. Across most cases, time and budget were major defining factors for how actors decided to engage with the public. What we found across the board, however, is that it pays off to make an extra effort to go “beyond the usual suspects.” Such engagement generates valuable input for planning processes as well as legitimacy for the overall vision. To illustrate this, we turn to the examples of Stuttgart, Auckland, London, and Boston.

Reflecting on the challenge of bringing a variety of people into participation processes, Wolfgang Forderer, Head of Stuttgart’s Mobility Department, highlights the importance of a strategic approach. In formulating their 2015 SUMP, he and his team quickly realized that public engagement cannot be treated

merely as a side-show to vision development. It is important to sit down at the beginning of a process, Forderer argues, and build an explicit engagement strategy. When it comes to the more silent members of society, Forderer highlights the positive effect of **randomly selecting and approaching people** from the city's civil register. Many of these, as he remembers, were quite grateful for being asked to participate.

Another approach was followed by the Auckland Council, the regional authority of Greater Auckland, New Zealand, in their "Auckland Plan 2050" (formulated in 2012). Here, the vision development team chose to actively approach networks of underrepresented people such as young people, low-income people, and ethnic minorities. Darren Davis, former Principal Transport Planner in the Auckland Council, explains that the goal was to actively rebalance a conversation that "is often weighted towards older, white/ Pākehā New Zealanders and people that literally have time on their hands and nothing better to do." This hearing of underrepresented groups, especially Māori, is directly displayed in the plan's design. "We moved much more towards Māori design principles regarding urban design. This makes our plan unique", Davis argues, and adds that "this identity makes us different to any other city in the world, and people really embraced that."

The case of London introduced us to yet another way of engaging a broad array of people. Here, engagement came later in the process, when a draft of the Mayor's Transport Strategy had already been formulated (see the next section on timing). City regulations demanded a consultation period in which the strategy had to be made publicly accessible for feedback. However, rather than seeing this period simply as a necessary procedural step

in the strategy formulation process, Transport for London (TfL), on behalf of Mayor Sadiq Khan, embraced the opportunity to **engage people much beyond what was asked for**. After preparing a set of necessary informational material, TfL reached out to the public using multiple channels, including online and hard copy questionnaires, postal mailings, and phone calls. Furthermore, they sent over 1.6 million e-mails to TfL customers asking for feedback. Finally, they organized four engagement workshops comprised of Londoners of diverse backgrounds. This consultation gave them confidence that "the vast majority supported our proposals," Keagan concludes.

Vineet Gupta, Director of Planning in the Boston Transportation Department, expressed most explicitly what it means to bring a variety of people in. Gupta led the city's "Go Boston 2030" vision development process, already mentioned at the end of the previous chapter. "To achieve broad consensus, the only way was to remove all barriers to participation", Gupta says. Boston started out their vision process by asking participants to submit questions about the future of mobility in Boston. They used a variety of channels and formats to reach a broad range of people: community events, a dedicated website, social media accounts, and community partners. A highlight of their approach was a question truck that visited all 15 neighborhoods in Boston. To foster further engagement and transparency, results were made available online.

Gupta and his team managed to collect as many as 5,000 responses. Subsequently, more than 600 participants translated the questions into goals and aspirational targets for the "Go Boston 2030" campaign at a two-day public "Visioning Lab". The participants were invited to comment and vote on theme walls where selected questions from the previous

phase were displayed. The results were then consolidated by Gupta's team. "This process led to the level of participation and consensus we were looking for and that paved the way for broad political support as well", Gupta summarizes.

3.2 Pick the right time for engaging with the public

Aside from the question who to engage, it is essential to ask when to engage. With respect to timing, we encountered two particularly useful periods for engagement. The first of these is early on, in the initial **formulation of a vision**. Here, people are asked "how do you want the future to look?" The aforementioned case of Boston is a good example: Gupta and his team started out with a very open-ended question and later condensed public input into a vision statement. In Switzerland, Zurich's public transport company VBZ took a similar approach with the "Zurich 2050" vision. Silvan Weber, Head of Market Development, explained to us how they started their engagement by asking "how do you want the mobility 2050 in Zurich to look?" Based on the results, four independent teams defined the future of public transport in Zurich from one unique

perspective each (comfort, speed, efficiency, and digitalization). These were finally channeled into one unified vision for 2050 by Weber's team.

Other cities we interviewed that took a similar approach were

Bristol, England, with their "Transport Strategy 2036" and Melbourne, Australia, when formulating its "Transport Strategy 2030". Summing up insights from these examples, participation during formulation has the advantage that vision makers can later point to the fact that 'this is what people want mobility to be like in our city.' Furthermore, handing the power to formulate a vision over to the people can help to push transformation when controversies in a city's institutions arise.

The second useful period concerns the **refinement of the vision** into a concrete strategy. Here, the leading question is 'how do we get to the future outlined in the vision?' The above example from London falls into this category. As the title of the "Mayor's Transport Strategy for London" suggests, it was the mayor himself who initiated the vision. "He had the clear view that London needed to reduce car use", Mike Keegan from TfL recalls, "and we made this mode shift a core part of our vision". Public (and stakeholder) engagement followed thereafter within the confines of this framing.

One advantage of focusing engagement on the refinement phase is that this approach seems to be particularly attractive to strong vision champions. This is the case for London as well as for two other cases already mentioned in the context of "be bold" and "pick your champion": Paris's "15-minute City" and Hamburg's "Hamburg-Takt". In all three cases, the strong association between the mobility vision and the mayor have led to a situation in which general elections have become a vote on these visions. This situation represents yet another form of public engagement: when featuring prominently in a general election, mobility visions can likely get exposure to a substantially larger audience than would otherwise be possible in mobility-related engagement formats.



VBZ is managing Zurich's public transport

Furthermore, focusing on public engagement in the refinement phase secures more control over outcome and ambition level since the original formulation derives from the vision makers themselves or a smaller circle of stakeholders. We encountered several cases in which a sustainable mobility agenda was backed by public institutions but not necessarily firmly anchored in the public. We found some examples of this in Cuenca (Ecuador), Gdańsk (Poland), and Rethymno (Greece). As Vasilis Myriokefalitakis, Advisor to the Mayor of Rethymno, explains, “people told us that we should not focus on wider pedestrian spaces, but rather on allocating more parking spaces.” However, he continues, “when you are a pioneer, you get opposition. Everything that is new is perceived with a lot of skepticism”. In such situations, pushing for a sustainable mode shift may be the right decision, but engaging the public too early in the formulation stage might work against this ambition.

On the other hand, focusing engagement on the refinement of a vision creates more concrete discussions. Rather than talking about how life will look in the future, people are inclined to talk about specific trade-offs, e.g., between road space and bike lanes or about the concrete path a new tram line will take. This is when the NIMBY (not in my backyard) mentality arises, which leads us to conflict in public engagement.

3.3 Push beyond conflict through transparency and piloting

Virtually all our conversations have shown that controversy will arise sooner or later when engaging with the public. Often, attitudes turn critical when discussion becomes local and concrete. Cities have developed different tactics to deal with this situation. One

of these is to **tie detailed discussions back to the overall goal of the vision**. We observed this tactic, for example, in the context of Detroit’s “Vision Zero”. As Caitlin Malloy-Marcon, Deputy Director of Complete Streets in Detroit, in the US state of Michigan, highlights “in Detroit there is a ‘car is king mentality’, and measures such as new bike lanes are not always met with gratitude”. Nevertheless, the constant reminder of why such measures are implemented helps to carry them through. Malloy-Marcon concludes, “in the end we shifted people’s mentalities and have won over some of the nay-sayers.”

“...in the end we shifted people’s mentalities and have won over some of the nay-sayers.”

Caitlin Malloy-Marcon
Deputy Director of Complete Streets at
the City of Detroit

A second tactic concerns the **creation process legitimacy**. Here, Brussels’ Regional Mobility Plan “Good Move” provides us with an example. “The vision was not hard to agree upon; it was trickier when we talked about measures and where to set the priorities, for example in removing parking spots,” as Bruno van Loveren, Strategy and Programming Director at Mobility Planning Authority in Brussels Capital Region, remembers. Nevertheless, the fact that stakeholders and the public had been involved in the vision’s development smoothed the selection of contentious measures. Van Loveren explains: “People and stakeholders understood that the process had been well carried out, even if they did not fully agree with the outcome.”

A third approach to moving beyond conflict is the **piloting** of concrete measures. Pilot projects help people to experience the positive change that transformative mobility policies might bring. The effect of piloting can be seen when turning to Barcelona's now-famous superblocks that combine up to nine city blocks and prioritize cycling and walking within. As Silvia Casorrán Martos, Deputy Chief Architect at the Barcelona City Council in Spain, recalls, the superblock idea was introduced the City's second "Urban Mobility Plan" (2013-2018).

The successful pilot changed the debate for consecutive projects. Martos explains: "the next superblock was not that risky anymore; it was expected and welcomed. The benefits became clear and business owners realized that it wasn't a harm to their activities."

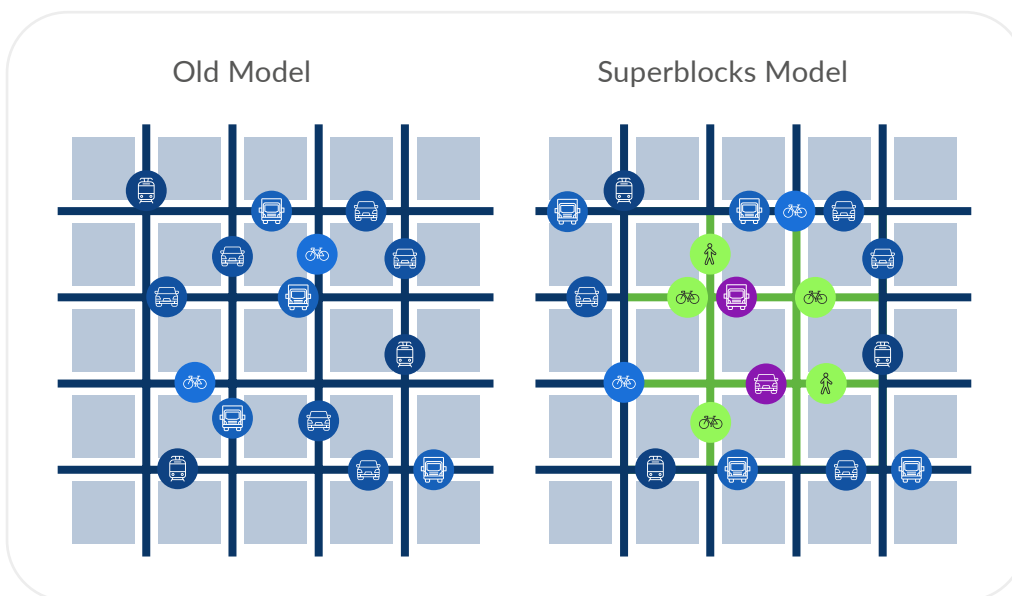
There are numerous other ways to implement pilots. The city of Hamilton, in the Canadian province of Ontario, for example, formed a "Mobility Lab" to encourage the public to run their own pilot projects. They did so "through different community-

centric design challenges, techniques, and partnerships," Peter Topalovic, Sustainable Mobility Program Manager, explains. Besides engaging the public, Topalovic's colleague Steve Molloy highlights, pilots made it easier to get political buy-in for infrastructure projects where there were still reservations to invest. While most of the pilots were successful and got

implemented long-term, there were failures as well. "However, I never see a failed pilot as a fail," Topalovic reflects. "Of course it's difficult, but we learn what we can do better and go on to try again."

3.4 Turn public engagement into a self-reinforcing driver of transformation

In the best case, public engagement can **transform your vision into a civic movement**. It is worthwhile to return to the case of Barcelona to explore this dynamic. Silvia Casorrán



Barcelona's Superblocks Model reclaims public space for people

A first piloting concept was developed but discontinued after a change in government in 2015. In 2016, however, a much leaner and low-budget pilot project was carried out by architecture students, in cooperation with the city administration. The Poblenou superblock started as a temporary experiment during the EU Mobility Week and Car-free Day in September 2016. "Initially, many neighbors and business-owners were against it," Casorrán recalls, "but after a few weeks people grew to like it, and the municipality decided to implement it long term."

Martos describes that “people started taking ownership of the street and even asked for furniture. People are now demanding better public space in Barcelona in general by asking for specific projects in their neighborhood in favor of our vision.”

“Since then, public space has become a symbol of citizenship. Infrastructure belongs to everyone, and anyone who dares to mess with it will have society against them.”

María Victoria Giraldo Gómez
Head of Business Development at
Metro de Medellín

Medellín, Columbia, presents perhaps the most vivid example of how mobility visions can turn into publicly-driven transformations. In our conversation with Juan Manuel Patiño Marín, Head of Urban Management at Metro de Medellín, he and his team explained how

the development of the Metro and the city's cable cars was intended to regain public trust after a period of violence overshadowed by drug



The Metro de Medellín has helped to regain public trust in city authorities

trafficking in the 80s and 90s. Transport was designed to support economic development, equality and equity, and so it did. As Marín's colleague María Victoria Giraldo Gómez proudly told us, “since then, public space has become a symbol of citizenship. Infrastructure belongs to everyone, and anyone who dares to mess with it will have society against them.”

Finally, the Dutch city of Houten demonstrates **how public engagement can enable change over decades**. In the 1960s, the village of Houten was designated as a growth center by the government. Back then, the city council consisted of farmers and other civilians. “They simply did not want the city to grow into a concrete jungle”, André Botermans, International Cycling Ambassador of Houten, explains. From the beginning, the vision was to build a city at human scale. “Due to that, 1960s urban planning in Houten was different from other cities at the time. It promoted cycling and walking while restricting road space and parking for cars.”

This vision has been implemented consistently and steadily ever since. Today, Houten is known as the bicycle city of the Netherlands. As for the public, support for the vision has actually grown stronger over time, because the resulting quality of life is highly valued. The people themselves have become the driving force and defenders of the vision. Defenders especially because “there's always a danger that newly elected officials from outside Houten won't understand the history we have and how important the vision is to the people,” Botermans explains. In this way, the public acts as a check on power.

4. Transform your vision into a living strategy

Having formulated, refined, and aligned an ambitious vision for urban mobility is not the end of the journey. Rather, it is merely the prelude to a transformation that can take decades. For this process, a vision alone is not enough. It has to be transformed into a living strategy that serves as a constant focal point for a continuous strategic dialogue and can adapt to changing circumstances over time. For bringing visionary ideas and concepts onto the street, we identified the following key themes:

- Break your vision down into an action plan
- Make your vision measurable and visualize progress
- Kick things off with purpose
- Act decisively and stay flexible

4.1 Break your vision down into an action plan

To transform mobility, it is essential to make a vision actionable — that is, to break it down into concrete targets, measures, and indicators. This is well demonstrated in the “CPH 2025 Climate Plan” from the City of Copenhagen. The plan, published in 2012, sets the overall vision of a Copenhagen that is climate

neutral by 2025. It subsequently breaks this vision down in a very systematic manner. First, the overall ambition is broken down into four pillars, mobility being one of them (the others being energy consumption, energy production, and city administration).

Each of these pillars is then specified by a handful of concrete and quantified goals. Mobility goals include, for example, a combined 75% modal share for sustainable mobility (cycling, walking, and public transport) as well as a CO2 neutral public transport system. At a third level, each pillar is broken down into so-called main initiatives that specify major fields of action within the pillar. For mobility, “City of Cyclists” and “Public Transport” are examples of these main initiatives.

Planning finally becomes concrete and actionable on a fourth level. On this level, the fields are detailed by specific initiatives. These initiatives follow a shorter planning cycle. Rather than being planned out for the whole length of the strategy, they are defined in the context of four-year roadmaps, the current one spanning 2021 to 2025. One example for an initiative is “100% zero-emission buses (including harbor buses) by 2025”.

Each initiative, furthermore, includes an analysis of the current situation (electrification of buses in the case above) and outlines concrete steps for implementing the initiative. Furthermore, the initiatives' effects are quantified. For example, the mobility initiatives in the 2021-2025 roadmap, taken together, are projected to save 58,000 tons of CO₂ in this last period.

"Vision Sofia 2050" shows us shows us an adaptation of the same logic. Their vision statement includes five priorities (e.g., a compact city). It furthermore features 24 goals that work towards these priorities (e.g., popular mass transport). Every goal is in turn specified by measures, milestones, and Key Performance Indicators (KPIs). Apart from this systematic breakdown of the vision, Sofia added a special twist: Kaloyan Karamitov, Urban Planning and Mobility Coordinator at the Sofia 2050 office, explains, "the special thing about our vision is that we did not use the typical tree structure, but rather a network structure where one goal can work toward different priorities and a given measure toward different goals." Karamitov and his team dynamically visualized this network on a dedicated website.

Taken together, a systematic breakdown of a vision helps to answer the question, "what is this for?" when we move into the often-demanding day-to-day work of implementation. When following clear logic, such as in the cases outlined above, each individual initiative, measure, and milestone can be traced back to broader goals and, ultimately, to the vision itself.

4.2 Make your vision measurable and visualize progress

"You have to have goals and metrics otherwise you are completely at the whim of industry

changes and political shifts!" These are the words of Kelly Rula, Mobility Team Lead at the Seattle Department of Transportation in the US state of Washington. Making a vision measurable with specified targets was essential in Seattle's effort to implement their "New Mobility Playbook" from 2017. Many other cities we interviewed also used KPIs to make their vision measurable. In the case of Copenhagen's climate neutrality ambition from the previous section, CO₂ reduction was the essential KPI. While this was measured on each level of the overall strategy, further KPIs were specified for lower levels. Within the mobility pillar, these are the modal share of sustainable modes of transport, the use of new fuels by light and heavy-duty vehicles, and public transport emissions. Besides these, there are KPIs for every initiative. "KPIs are really important instruments for tracking progress and therefore a key part of our decision making," says Jørgen Abildgaard, the Executive Climate Program Director for the City of Copenhagen.

“ You have to have goals and metrics otherwise you are completely at the whim of industry changes and political shifts! ”

Kelly Rula
Mobility Team Lead at the
Seattle Department of Transportation

When designing KPIs, it is important to make sure that they **measure progress towards the actual target**, rather than simply building on data that is there. Here, just as in the case of formulating a vision, debate tends to become quite technical. Many of our interviewees, for example, reported a tendency to measure infrastructure development rather than

changes to mobility patterns. Malmö, Sweden, is one of the places that managed to avoid this tendency. „We don't talk about built kilometers of infrastructure, but rather about modal share, because it's easier to understand and less 'engineery',“ Andreas Nordin, Traffic Planner at the Malmö City Council, reports. He continues to stress the importance of well-designed KPIs, highlighting that, “without tracking and communicating our results, I don't think we would have come this far [in implementing our vision].”



Surveys are being conducted in Manchester to ask passengers about the predictability of travel times

In Manchester, Nicola Kane, Head of Strategic Planning, Insight, and Innovation at TfGM, pushed even further with her team by designing KPIs that directly measure their strategy's seven “customer principles”. The principle “reliable”, for example, is operationalized by KPIs like journey time predictability that are measured through dedicated “Multi-Modal Network Principles Surveys”. The latest of these surveys was conducted through phone interviews with over 4,000 residents. Kane recalls, “KPIs are an area where we did quite a lot of work. In addition to taking an operational view, we also created a set of KPIs that focus on the customer's perspective.”

A second insight from Manchester is that this level of precision needs to be **balanced with the realities of data collection**. As Kane continues, handling an extensive set of KPIs is “quite challenging, because it can be expensive to collect the data and keep it up-to-date.” In Manchester, therefore, they plan to evaluate their approach “to see how useful those KPIs are in driving action,” Kane says.

Finally, breaking a vision down and measuring it can become quite complex, and this complexity needs to be managed. **Visualization is a powerful tool for reducing complexity**. We encountered one key example of this in our interview with Karoliina Isoaho, Environmental Inspector for the City of Helsinki, Finland. Helsinki summarizes the progress of its “Carbon-neutral Helsinki 2035 Action Plan” on a dedicated “Climate Watch Monitoring Platform”.

The platform provides detailed information on individual measures. It also provides dashboards visualizing aggregated KPIs. This has made it much easier to communicate the vision, Isoaho explains. She also introduced us to an ongoing project with the aim of adding a publicly accessible simulation model to the platform. “Anybody on the website will be able to see and test interactively what happens to emissions when they change, for example, the share of electric cars.” Isoaho hopes that this will further increase support from the public and decision-makers alike.

4.3 Kick things off with purpose

After translating a vision into a consistent strategy, the question becomes, „how and by whom will it be set in motion?“ A first important insight we took from our interviews is that **a strategy needs an organizational home** with clear accountability, sufficient authority, and dedicated resources.

While most cities agreed that an organizational home is essential, the concrete form it takes depends heavily on existing governance structures. Many cities opted for a decentralized governance approach in which a dedicated vision team or project management office coordinates relevant actors across institutions. Examples are the “Superblock Office” within the city administration in Barcelona and the “Office for Cycle Superhighways” in the Greater Region of Copenhagen.

“If you want to transform mobility successfully, you need a powerful organizational structure.”

Dr. Martin Schreiner
Director of Strategy at
Munich's Mobility Department

The City of Munich serves as a good example for a more centralized approach. Here, the development of the “Mobility Strategy 2035” was accompanied by the establishment of a new Mobility Department in 2021. Dr. Martin Schreiner, Director of Strategy at the Mobility Department, describes this unit as a “communal ministry of transport”. It bundles all mobility planning and controlling competencies and, therefore, all major resources needed for implementing the city's vision. Schreiner highlights, “if you want to transform mobility successfully, you need a powerful organizational structure.”

A special concern with respect to organizational structure is that of data. Integrated data sources can go a long way in facilitating collaboration across institutions, since it allows these institutions to start out from the

same factual basis. Data integration, however, inevitably brings up a flurry of concrete and technical questions related to data formatting standards, data handling protocols, and IT procurement. Given this complexity, several of the cities we interviewed opted for the establishment of a **dedicated data office**. In Kraków, for example, a so-called “Mobility Observatory” has been planned. It will be responsible for providing a unified source of mobility data for analysis, monitoring, and evaluation activities.

Besides governance structure, setting a vision in motion demands the **right people**. László Sándor Kerényi, Director of the BKK Center for Budapest Transport in Hungary and developer of their SUMP, argues that „even more than the process, you need visionary people who are capable of making waves and stirring up the administration if needed.“ Henrik Falk, CEO of Hamburger Hochbahn, stresses the same point. “Behind each strategy, there are people. When these people simply hide behind the strategy, you might make some progress. However, this will not be enough for real change.”

We already highlighted the importance of the right people when we explored the role of the core team behind a vision in Chapter 2 (“Engage the right stakeholders at the right time”). Our interviewees were clear that the right team is just as important throughout execution. To this end, the core project



Setting a vision in motion demands the right people

management team needs to steer the process proactively: not waiting for input, but rather going out and proactively pushing people to provide input. KPIs, as mentioned above, are just one tool that can facilitate such change. In the context of Brussels' "Good Move" plan, for example, a well-designed KPI system was key in overseeing the work of other departments and pushing them towards execution, as Bruno van Loveren, Strategy and Programming Director of the Mobility Planning Authority in Brussels Capital Region, reports.

Furthermore, instead of administering content provided by other teams and departments, the project management team should actively challenge other teams to do their best. Elaborating on how their vision team managed the execution of the Transport Strategy 2030 in Melbourne, Australia, for example, Transport Strategy Manager Richard Smithers highlighted the importance of challenging each other on a content basis. "It was actually great to have other departments challenge the work so that the leading team could articulate their views and have collaborating departments motivated with the answers." In the best case, this attitude can be adopted by other institutions and teams. As Schreiner from Munich's Mobility Department stresses, "we need more agility, more courage, and simpler processes in the whole administration. If we take the mobility transformation seriously, we also have to transform the way the administration works."

4.4 Act decisively and stay flexible

Building structures and processes that carry the vision in the medium and long terms is important. At the same time, however, it is essential to stress that speed and adaptability remain essential. This became particularly apparent with COVID-19. In cities like Birmingham, Malmö, and Lisbon, the vision provided

the playbook by which to navigate the crisis. They helped to **act swiftly and decisively in a moment of uncertainty**, for example, in the acceleration of measures such as new bike lanes and pedestrian paths. Pedro Machado, the former Mobility Advisor of the Deputy Mayor of the City of Lisbon, Portugal, sums up this widely shared phenomenon: "everything we're doing right now [during the pandemic] is already in the vision. Some things that we thought we would do years from now we have done already."

Birmingham, United Kingdom, also seized the moment and systematically prioritized short-term planning while sticking to the vision and goals already outlined in the Birmingham "Transport Plan 2031", which was under development when the pandemic hit and later published in October 2021. As Ioanna Moscholidou, Transport Planning and Investment Lead at Birmingham City Council, told us, they "radically reduced their planning horizons, looking for results in three categories, in weeks, in months, and beyond the year." This resulted in the "Emergency Transport Plan", published in May 2020, with the aim of implementing concrete measures, such as pop-up bike lanes, wider sidewalks, and bus-only corridors. As well as delivering quick results, the emergency plan helped to secure part of a £2 billion national funding package as well as funding from other sources. One helpful tool in acting swiftly and responding to unforeseen events is scenario planning. This was used, for example, by Transport for Greater Manchester at the onset of the COVID-19 crisis to explore potential impacts and to understand what needed to be done.

Speed is not only important in a crisis, but also in regular planning. One mechanism for accelerating the impact of a vision has already been explored in Chapter 3 ("Use public

engagement to build a city movement”): pilot projects. Such projects quickly make positive change visible and can thus help in subsequent debates about the implementation of more extensive measures.

Another accelerating mechanism is the **fast-tracking of quick-win projects**. If there are projects that have a clear added value, strong political and public backing, and secure financing, there is no need to wait. The aforementioned “Office for Cycle Superhighways” in the region of greater Copenhagen presents an interesting case here. The office coordinates the implementation of cycle highways across municipalities, and it follows a very opportunity-driven approach in doing so. The office is in constant dialogue with municipalities. Every year, they decide on priority projects based on political will and available resources in individual municipalities. As Sidsel Birk Hjuler, head of the office, explains, “after having outlined your long-term vision of how cycle highways should look like in the future, it’s just that: figuring out who is ready.”

Beyond this, a growing number of cities seem to be moving into an **increasingly dynamic planning approaches**. In sharing her experiences in the context of the Birmingham Transport Plan 2031, as introduced earlier, Ioanna Moscholidou highlights that “it’s not like the plan is developed and we close the book. We incorporate new things because circumstances evolve.” Other cities share this approach, with Pedro Machado from the City of Lisbon, for example, stressing that “we designed the vision to be a dynamic process that can be updated constantly.”



Birmingham and Manchester trialed e-scooters during COVID-19 crisis

Transport of Greater Manchester, finally, follows a similar idea with their adaptive planning approach. While working toward a long-term vision, they supplement this long-term perspective with an annual planning cycle. Importantly, this annual planning is not limited to annual progress reports. Beyond reporting, TfGM does critically examination and occasionally adapts the measures laid out in their strategy. In this way, they move away from an approach focused on planning, simulation/prediction, and long-term roadmaps. Instead, they adopt a more agile management and planning style. According to their Head of Strategic Planning, Nicola Kane, “having those adjustments [in measures] is really helpful when dealing with uncertainty and in taking new opportunities when they arise.”

5. Use your vision to unlock financial resources

Financial resources are crucial for implementing your vision and its associated strategy. Usually, people associate a transformation to sustainable mobility with additional cost. New infrastructure has to be built, and old infrastructure requires modification. Furthermore, new sources of data may have to be identified, and management of the transformation, as explored in the previous chapter, binds additional resources. Indeed, among our interview partners, roughly one-third stated that their vision tends to be underfunded.

However, this is not the whole story. In this chapter, we want to focus on four ways in which a vision can help to unlock financial resources:

- Highlight the positive externalities of your vision
- Place the vision at the core of your funding strategy
- Leverage the vision in local funding allocation
- Work with stakeholders to make your vision a reality

5.1 Highlight the positive externalities of your vision

In Economics, externalities are positive or negative effects that derive from a product or service but which are not reflected in the price of that product or service. Driving a gasoline-fueled car, for example, creates externalities in the form of greenhouse gas emissions. These externalities are negative since they provoke further climate change; however, only rarely does the driver of the car have to fully pay for these consequences. Carbon taxes or emission trading schemes aim at internalizing these consequences by putting a price on them that can then be attributed to the original product or service.

Positive externalities follow the same logic. Something can create positive effects that are not accounted for in a narrow calculation of cost and benefit. **The quantification of positive externalities** can make the transformation to sustainable mobility appear much more attractive. For example, avoiding traffic or shifting to environmentally sustainable

modes of transportation reduce greenhouse gas emissions as well as local pollution. The former helps to reduce the wide-ranging negative consequences of climate change. The latter has direct health benefits, e.g., by reducing the number of respiratory diseases. An increase in active mobility and a reduction of traffic accidents have further positive effects on public health. Moreover, new forms of mobility can increase a city's equity and accessibility and thus create new opportunities for work, education, and societal participation. Finally, in making cities more livable, transforming mobility can also increase a city's attractiveness for tourists and employees.



Cycling has positive effects,
for example on public health

In the region of greater Copenhagen, we found a good example for how to make positive externalities visible: the region's Cycle Superhighway Office. The Office aspires to build a cycle superhighway network of 45 routes with a total length of 750 kilometers. To

support their case for more for cycle highways, they commissioned a study on the socio-economic effects of the network. The study found that the network would lead to six million additional bicycle trips and one million fewer car trips annually. This was calculated to result in 40,000 fewer sick days per year, among other effects.

Overall, the study found that the investment cost of 295 million euro (to be spent by 2045) was likely to be outweighed by positive externalities valued at 765 million euro.

The analysis provided a strong argument for discussions with municipalities that were thinking about investments in cycling infrastructure. "The analysis has shown that this is one of the best investments you can make in Denmark these days," emphasizes Sidsel Birk Hjuler, Head of the Cycle Superhighway Office.

Another example, from Hamburg, shows how the positive societal and environmental externalities of a vision can **directly unlock financial resources**. In 2021, Hamburger Hochbahn issued a "green bond", raising 500 million euro on the capital market. Roughly 70% of these funds will be used for expanding and renovating the Hamburg metro system. The remaining 30% are earmarked for zero-emission buses and for improving customer service infrastructure. Receiving these funds was made possible by the fact that the projects conform to the "Green Bond Principles" of the International Capital Market Association (ICMA), which were designed for financing environmentally sound and sustainable projects that foster a net-zero economy. This made the Hochbahn's projects eligible for a growing number of investors focused on sustainable financial returns.

5.2 Place the vision at the core of your funding strategy

One major source of financing, particularly for new and innovative mobility projects, is government funding, either from the European Union or the national or regional level. **A vision and associated strategy provide a clear focus** when approaching providers of such funds. Because a lot of strategic thinking has already been done in developing a vision and its strategy, they can also help to act quickly when funding opportunities arise. Furthermore, they create credibility when applying for

funding. Karina Ricks, Director of Mobility and Infrastructure for the City of Pittsburgh, argues accordingly, “if you do not have something like a vision, you tend to pick random projects as soon as resources become available. This will not help you to tell a consistent and convincing story. Having a clear vision, on the other hand, can become a self-fulfilling prophecy by inspiring people and convincing them of your cause.”



Pedestrians are the top priority in Gdańsk

Eastern European cities from states that joined the European Union from 2004 onwards (for example, Sofia, Bulgaria, as well as Wrocław and Gdańsk, Poland) seem to have developed a particularly strategic approach to vision-based funding acquisition. In Gdańsk, for example, Grzegorz Krajewski, Mobility Specialist in the city administration, is responsible implementing EU-funded projects in alignment with the “Gdańsk Development Strategy 2030”. For him, the city’s strategy is key in handling funding opportunities. As he explains, “pedestrians are the strategy’s top priority. Then come cycling and public transport. Thanks to that, we have a clear take on where our priorities lie when searching for funds and applying for them.”

In recent years, this strategic approach to funding acquisition seems to have increasingly spread across Europe. According to László Kerényi, Director of Strategic Planning at the public transport company BKK in Budapest, “more and more European cities are interested in leveraging the EU’s financial resources to implement a sustainable mobility transformation in their city.”

However, the benefits of putting the vision at the core of a funding strategy does not stop at leveraging existing funding. It can also help to **create additional funding opportunities**, that would not have been possible otherwise.

The City Council in Leeds, for example, has been anticipating the decline of current governmental funding for the city’s transport sector in the context of their three-year Action Plan to 2024. Paul Foster, Transport Strategy Manager at Leeds City Council, says, “it is thus a big challenge to implement the ambition that we’ve set for ourselves with our “Connecting Leeds” vision.” However, while the vision has created the need for additional funding, it has also helped to make more funding available. After realizing their need for additional financial resources, Leeds approached the West Yorkshire Combined Authority as well as the national government to explore new funding opportunities. Foster highlights, “at the moment we are riding the positive wave that the vision created. The authorities see that things are going in the right direction.” This momentum helps, he concludes, in getting these important conversations about new funding sources started.

5.3 Leverage the vision in local funding allocation

While external funding is important, local funding allocation is just as essential for urban

mobility to function. Urban mobility, and particularly public transport, are usually subsidized by local governments, often with the help of higher levels of government. At the same time, from a city's perspective, mobility is just one of several important societal tasks, such as providing education, improving public health, and ensuring safety. Particularly in today's situation, in which the COVID-19 pandemic has left a substantial mark on state finances and rising inflation creates additional problems, the distribution of funds across these different tasks has become increasingly difficult.

Allocation between sectors demands prioritization and political negotiations. In these negotiations, a vision can be an important asset. It helps to clearly state the activities that money will be spent on and allows one to pin down positive externalities that might tip the balance in favor of investment in mobility (see above). We encountered two helpful tactics for navigating these negotiations and making the best of a mobility vision: Actively leverage the vision in funding debates and anchor it legally.

The first of these demands a constant exchange with the relevant stakeholders. In Manchester, for example, these were the mayor, the Greater Manchester Combined Authority (GMCA), and the local authorities. Existing funding provision and additional funding requirements for the "Transport Strategy 2040" was laid out in the five-year "Transport Delivery Plan". „We have been quite successful at securing funding and support, in particular for some significant transport infrastructure, because we have quite a long history of working collaboratively across the different tiers of local government," explains Nicola Kane, Head of Strategic Planning, Insight, and Innovation at Transport for Greater Manchester. "Because of the vision, we were able to make a much stronger case for the investment that we need

to make that vision a reality," Kane says.

For the second tactic, it is worthwhile to turn to Hamburg

once more. Here, Hamburger Hochbahn managed to secure long-term commitment to finance the "Hamburg-Takt" through the vision's inclusion into state law.

Given the vision's popularity and the importance of mobility issues in public debates, the Hamburg-Takt was legally anchored in the city's climate protection law, and the associated climate plan launched in 2019. The latter features the Hamburg-Takt as a core initiative for reaching the goal for CO₂ emissions from the mobility sector. Hochbahn CEO Henrik Falk highlights the financial resilience that comes with this. "Regardless of unfavorable conditions, such as the COVID-19 pandemic, we can say that climate change doesn't wait for us. We must act now. This gives us a lot of credibility." In concrete financing terms, the Hamburg-Takt's inclusion in the climate plan allows Hochbahn to access parts of the two to three billion euro of funding that the state government agreed to invest in climate protection until 2030.

5.4 Work with your stakeholders to make your vision a reality

Finally, apart from the different kinds of public funding discussed so far, funding from private sources can be an additional source of financing for sustainable mobility transformation. There are different ways such funding might be acquired. Across Europe, the debate



The Hamburg Takt is part of the city's climate protection law

about **financing the mobility transformation through obligatory measures** has intensified in recent years. London is an early example, with their congestion charging scheme introduced in the city center in 2003. This charge was supplemented by a “Low Emission Zone” in 2008 which now covers the whole of Greater London and was intensified in inner London with an “Ultra Low Emission Zone”, specified in the Mayor’s Transport Strategy from 2018. The income generated from these measures—roughly 232 million pounds annually—is being reinvested by Transport for London into public transport. Other cities like Gothenburg and Milan are financing part of their mobility vision implementation through similar road pricing schemes.



The Congestion Charge and Emission Zones in London proved successful in raising additional funds for public transport

Other regions have also started to venture into new ways of obligatory financing. One of the more extensive examples is Baden-Württemberg, one of Germany’s 16 federal states with roughly 11 million inhabitants. The state aims for climate neutrality by 2040. In the transport sector, this ambition translates into a doubling of passengers by 2030. A major initiative to achieve this goal is the establishment of

so-called mobility passes and mobility guarantees. While the latter is a pledge to public transport quality, the former is meant to finance the expansion of public transport.

In early 2022, the state started pilot projects with 21 cities and counties (“Landkreise”) that now explore potential ways to implement the mobility pass, either as a citizen ticket, a local transport fee to be paid by motor vehicle owners, or a road usage fee.

Although such obligatory measures promise substantial financial resources, they can also generate political and societal opposition. London, for example, discussed further obligatory financing options besides the congestion charge and emission zones mentioned above. In 2017, Transport for London “outlined ways of getting a residential contribution as well as certain levels of tax supplements on businesses,” Julian Ware, Head of Corporate Finance at Transport for London, shared with us. However, as he continued, “they were not seen as acceptable.”

When obligatory measures are unlikely to work or will take too much time to implement, a **collaborative approach might constitute a viable alternative**. Here, external implementation partners as mentioned in Chapter 2 (“Engage the right stakeholders at the right time”) can become powerful allies.

“ We aim to work with partners that want to be in the front seat, try out new solutions, and explore possibilities. ”

Jørgen Abildgaard
Executive Climate Program Director
for the City of Copenhagen

Jørgen Abildgaard, Executive Climate Program Director for the City of Copenhagen, for example, sees their climate vision as an important facilitator of collaboration with private actors. “We aim to work with partners that want to be in the front seat, try out new solutions, and explore possibilities,” he states. The city had already involved private companies since the initial development of their vision. This helped to identify implementation partners willing to collaborate and projects they might be interested in. Abildgaard explains, “we set up special meetings with those stakeholders to see if their project ideas fit into our vision and financing schemes.” In one example, the city collaborated with energy companies and the Danish Technical University to establish EnergyLab Nordhavn (starting 2015). The companies supplemented 11 million euro of public funding with a private investment of 8 million euro. EnergyLab Nordhavn subsequently worked on a variety of projects, for example the integration of a large battery and energy management system to support vehicle charging during peak loading hours.

Even though public/private co-financing might be uncommon in a German setting,

it is not unheard of. The Kölner Verkehrsbetriebe (KVB), for example, used such a funding scheme for the extension of Line 5 of their light rail (“Stadtbahn”), inaugurated in 2010. In this case, the initiative came from companies that wanted to see their locations connected to the public transport network. Ultimately, 40 private companies contributed 5 million euro of the 18 million euro total capital investment. This initiative might well become an inspiration of future financing schemes when considering the substantial expansion and transformation of urban mobility infrastructure needed to make mobility carbon-neutral.

Ultimately, transforming a city will remain a long-term, arduous, and costly endeavor. However, the cities we talked to showed us that it is possible and that the cost will be outweighed by the benefits of more likable mobility and more livable cities. When designed and executed right—from the formulation and the involvement of stakeholders and the public to its translation into a living strategy and its strategic use in financing debates—a vision can be a powerful tool in making this change happen.



Mobility Institute Berlin (mib) is a consultancy that furthers the transformation of mobility. In close cooperation with our clients, we develop visions and strategies to achieve future-proof, sustainable transport for livable cities.

mib Mobility GmbH was founded in 2018 by Torben Greve. Today, we have over twenty employees working in our offices in Berlin and Madrid. In our daily work, we combine public transport expertise with strategic consulting skills and data analysis capabilities to develop

excellent public transport offers. Our clients include cities, public transport authorities and operators such as Hamburger Hochbahn, Kölner Verkehrsbetriebe, Verkehrsverbund Rhein-Ruhr, and the City of Munich, among others.

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