Putting people at the heart of mobility

A new approach to traffic planning
Over the past decade, the public transport renaissance has been in full swing – including novel pricing models, new offerings and mobility apps.

Then came COVID-19 – and with it a huge impact on passenger behavior and providers’ profitability.

Even before the pandemic, mobility offerings didn’t necessarily translate into higher passenger usage. In many cities and regions, the car is still the preferred mode of transport.

To create attractive local public transport offerings – particularly during a pandemic – users need to be placed at the heart of traffic planning to understand their needs, concerns, habits and willingness to change their behavior.

Accenture, Fjord and ioki have joined forces to help mobility companies better align supply with user preferences during planning and have enriched traffic data with psychological insights to gain a solid understanding of the potential of the attractiveness of new mobility offerings. This approach can identify supply gaps and also help define how new services should be designed to maximize passenger uptake.

The results are multiple benefits for municipalities and mobility companies. A more targeted approach is not only essential in designing mobility services, but also influences customer outreach through advertising and marketing.

And most importantly, dropping the old “trial and error” approach to planning can help stretch limited financial resources.
Rethinking mobility from the user’s perspective

The critical question for every traffic planner is: How can consumer uptake be guaranteed when planning and designing a new service offering? It is not enough to focus only on identifying undersupplied areas; the planning approach must also identify the actual needs of local people and incorporate this into the overall picture. Only then is it possible to design a new mobility offering that provides enough of an incentive for people to use it.

Holistic traffic planning synthesizes user motivations and traffic flow analysis. In order to combine these two perspectives, a two-stage planning approach supplements a purely data-driven analysis with insights into potential users’ needs and desires. Psychology plays a key role in understanding how and when mobility behaviors can be changed.

By combining quantitative and qualitative methods, valuable insights can be derived from psychological factors and traffic data as well as supply-side and user perspectives. Not only does this approach pinpoint service gaps, it also provides important information early on about how a future mobility offering should be designed to appeal to local users.
First step: Mobility analysis

To identify underserved areas, an in-depth mobility analysis seeks to answer three questions:

1. Are the current public transport offerings sufficiently attractive?

2. Can a new mobility offering that complements existing services increase the attractiveness of public transport significantly?

3. When creating a new mobility offering, does it need to be designed as a door-to-door service because existing public transport structures are not as desirable as private cars?

Regional traffic flow, infrastructure, geographic and sociodemographic information provide detailed insights into a particular planning area's transit requirements. This data can be enriched by simulating demand in a specific target group. And by evaluating door-to-door journeys based on individual movement data, accurate insights for actual mobility patterns can be provided.

Data from the initial analysis and simulation are merged to identify specific areas to launch new mobility offerings. Further simulation checks can help identify what the new offering would look like in operation, and finally, profitability can be calculated based on the new offering's cost and anticipated demand.
Second step: Assessing user needs

Once the hard data is analyzed, the second stage focuses on user psychology to understand attitudes toward new mobility offerings, determine general mobility behavior and shape the offerings to better suit user preferences. Planners can also identify additional factors that might change customer needs and influence users to take up new services.

A global study¹ by Volkswagen, Accenture and Fjord, surveying more than 50,000 people, looked closely at user behaviour. With the help of qualitative and quantitative survey methods, the mobility behavior of people in urban, suburban and rural areas was examined.

The study showed that respondents’ individual mobility preferences can be summarized in six “Mobility Mindset” categories that reveal a range of motivations:

**For Risk Evaders**, the public space has many dangers and threats. An unpleasant encounter with a stranger or the increased risk of communicable diseases are some examples.

**For Humanitarians**, the common good takes precedence over comfort and habits. Sustainability plays a major role in their decisions.

**For Planners**, love it when plans go smoothly. They don’t like giving up control and struggle with uncertainty. Mobility must be reliable for them.

**For Penny Pushers** are particularly cost conscious and make decisions primarily based on price. The cheapest, rather than the most convenient solution is usually the preferred one.

**For Comfort Seekers** put personal comfort first. Changes and long journeys are challenging for this group.

**For Joy Makers** mobility is fun and an end in itself—whether in everyday life or on vacation.
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Lake Geneva region pilot

While this two-stage planning approach yields results in as little as six to eight weeks and can be used to plan transport in any city or region, it was initially tested in the Lake Geneva region where about a fifth of Switzerland’s population lives. The densely populated area along Lake Geneva contrasts with the sparsely populated region in the north. Local public transport is well developed in many places but only makes up around a quarter of all regional trips. This means that in the greater Geneva-Lausanne-Vevey area, there is persistent, heavy traffic congestion and the road network regularly reaches its load limit despite sufficient public transport capacity.

To encourage more residents to switch to public transport, the Swiss Federal Railways SBB, the Geneva public transport company TPG (Transports Publics Genevois) and its counterpart in Lausanne, the TL (Transports Publics de la Région Lausannoise), created the Arc Mobilité integrated transport initiative for the region. It aimed to get people out of their cars and onto public transport as easily and quickly as possible, with the target of replacing 10,000 car journeys per day.

To support the planning initiative, Accenture, Fjord and ioki focused on identifying areas where investment in new mobility offerings could create a true alternative to car journeys. While the approach focused on closing existing supply gaps by expanding mobility offerings in underserved areas with on-demand transport, it also sought to increase the quality and attractiveness of existing mobility offerings to users.

In a first stage, six areas with the largest local public transport supply gaps were identified. Subsequently, the design of new mobility offerings that best suit the needs and desires of local residents were analyzed. In the municipality of Puidoux, for instance, 15,000 car trips are made per day, 20% of which could potentially be taken off the road. The analysis showed that “Comfort Seekers” in this suburban area preferred premium services that offered more convenience. Mobility providers can create demand in this segment through a customized, passenger-centric approach, offering services such as ride-sharing fleets of luxury vehicles or helping passengers with individual shopping needs.
Better decision-making in public-private mobility partnerships

The time is ripe for a new approach to public transport provision where private companies play a greater role in offering on-demand mobility services in underserved areas. This approach, however, requires a true partnership that unites public sector interests with those of private transport service providers. Both sides stand to benefit. Municipalities can increase the attractiveness of existing public transport services using on-demand services to close the first and last mile. In return, private mobility providers would have a high level of planning security over the long-term to manage commercial risk.

Ultimately, integrated traffic planning aims to close the gap between innovative private mobility providers, who often struggle with a lack of profitability, and local public transport operators, whose means to expand services are limited. In the process, it’s important to forecast service uptake as precisely as possible during planning to minimize financial risks.

This approach to traffic planning builds a better decision-making foundation for municipalities and private mobility providers.

The current pandemic is set to fundamentally change mobility as we know it, with a significantly broader mix of mobility options and providers. To address user anxieties, it is likely that more private operators will be tailoring their services to meet these needs.

The public sector will need to use financial resources more wisely than ever before, and in a more targeted way. By working together, private mobility companies and municipalities can help each other accomplish their goals.
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