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Research Topic

Mobility-as-a-Service (MaaS) represents a shift from vehicle ownership-based mobility to mobility consumed as a service. MaaS enables users to plan, book, and pay for door-to-door trips by using a single app and enjoy a near-seamless journey via a single or multiple travel modes, such as public transit, carsharing, ride-hailing, e-scooters, and shared bikes.

To realize this concept, emerging MaaS players, such as Uber and Lyft, are investing in MaaS platforms to become one-stop shops for urban transportation. However, while they have improved mobility for many, including those without car access, their rapid proliferation has also sparked heated debates over their potential impacts on safety, equity, and public space use, as well as their near- and long-term effects on traditional public transit services. This changing mobility landscape poses a challenge to public transit agencies, forcing them to rethink about their roles in regional transportation networks.

This study investigated how the public sector can most effectively collaborate with private companies to improve regional accessibility while protecting public interests -- such as equal mobility access, effective traffic management, and safety.

Main Findings

- The successful launch of MaaS programs with private companies requires a combination of (1) public agency executives' commitment to innovative solutions, (2) effective contract management, (3) failure tolerance, and (4) knowledge spillovers across departments and institutions.

- MaaS pilots are often hindered by (1) the lack of public sector technical knowledge, (2) divergent public and private goals, (3) disagreements over data sharing, and (4) rigid public sector business operations.

- Agencies' conventional contract-out approach is less likely to work for MaaS public-private alliances. In that model, transit operators define the service scope, determine a statement of work for the vendor, and draft a contract with the selected firm. However, due to the lack of technical knowledge about emerging services, it is difficult for public agencies to effectively draft MaaS contracts.

- Markets still require public intervention to mitigate negative externalities, such as limited access to app-based services as well as increased congestion and emissions.

KEY TAKEAWAYS

- Transit agencies can enhance access for all of their customers, including carless populations, by working closely with emerging MaaS companies.

- Organizational transformation, new regulatory frameworks, and strategic alliances will help public transit agencies be more responsive to the fast-changing mobility environments and advance MaaS solutions with private partners.

Study

This study employed both a literature review and case studies that combined published information from transportation authorities on their MaaS programs as well as in-depth interviews with people who work in those programs. For interviews, the researcher selected three transit authorities that are developing on-demand mobility services and open payment/trip-planning platforms with private partners: Los Angeles County Metropolitan Transportation Authority (LA Metro), Dallas Area Rapid Transit (DART), and Tri-County Metropolitan Transportation District of Oregon (Tri-Met).

Conclusions/Recommendations

- The emergence of MaaS requires organizational transformation at public agencies. These agencies should acquire technology and market knowledge about emerging services, create a more failure-tolerant culture, and update business operations — in particular, procurement processes — to allow the testing of promising but unproven solutions.

- MaaS requires a new regulatory framework. Public agencies should employ "soft laws" (e.g., industry guidelines) and "regulatory sandboxes," temporarily relaxed regulations to test new technologies in a live environment, to try new rules and flexibly modify them when needed.

- Public agencies should offer a cash-accepting payment platform, which would allow those without a smartphone and a debit/credit card to access MaaS.

- Transit agencies should pursue strategic alliances with private MaaS providers. These partnerships allow the public and private parties to communicate more frequently about their needs and innovative ideas.

- If public agencies want to reduce solo-driving, they should not only advance MaaS but also increase the price of driving by charging for road use and parking.

For More Information

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