MOBILITY ON DEMAND (MOD) PROGRAM
Business Models Analysis

What Is Mobility on Demand?

The U.S. Department of Transportation (U.S. DOT) uses the term MOD to represent its vision for future mobility. MOD envisions a safe, reliable, and carefree mobility ecosystem that supports complete trips for all, both personalized mobility and goods delivery. The U.S. DOT achieves this vision by leveraging innovative technologies and facilitating public-private partnerships to allow for a user-centric approach that might improve mobility options for all travelers and delivery of goods and services.

What Is a Business Model?

The term "business model" describes the nature of a supplier's relationships to its customers and to other suppliers of goods and services that go into its products. It is the outline of how a company positions and sustains itself in the marketplace.

Distinct Modes and Business Models

Not every business based on a given vehicle type will function the same way. For example, bikesharing is a single mode that has multiple business models with differing implications for meeting public needs and transportation challenges:

- **Facility:** In one business model, bikesharing may use fixed facilities (docks) that are placed at known locations in the public way, usually after discussion and negotiation with the public entity that controls that right of way. In another model—dockless—the service has no fixed facilities, with GPS-equipped bikes picked up or parked wherever convenient to users.

- **Revenues:** Bikesharing may be paid for by users through annual subscriptions or on a pay-as-you-go basis; non-user revenue sources may include local, state, or federal grants, sponsorship, and advertising.

- **Management:** A governmental agency may or may not be involved in direct management of the service. Although early bikesharing was often owned and operated by nonprofit entities, bikesharing has evolved into operations being primarily run by for-profit entities and sometimes governmental agencies.

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MOD BUSINESS MODELS ANALYSIS

What Is a MOD Business Model?

A MOD business model can be broadly characterized by its primary commercial relationship—e.g., business-to-consumer (B2C) or business-to-government (B2G)—and in more detail by elements such as the mode (e.g., bicycles, scooters, vehicles for hire), value proposition, customer base, partnership mechanism, and revenue source. This more granular detail is useful for assessing how a business model might address a particular transportation challenge.

Choosing a Business Model to Address Specific Transportation Challenges

The following considerations should factor into business model decisions:

- **The business model chosen should be based on the goals being addressed.** For instance, bikesharing enables congestion relief by providing an alternative to modes that occupy the travel lanes. But within that mode, different models can fit varying goals and local circumstances. The mix of available revenue types might also influence a locale's model choice.
- **Consideration of the impact on public goals should include the potentially limited effect of any one factor.** Congestion, for example, may be alleviated to some extent by several of the MOD modes and exacerbated by others.
- **Broad business models such as B2C have components that include the mode and revenue source.** The more granular description of a business model, differentiating on mode and revenue source, assists in assessing whether a particular business model addresses a transportation challenge.
- **Business models are dynamic, and a public agency may want to consider how a potential partner may change in terms of its ownership and revenue source.** Public organizations must consider the range of options for achieving public goals, including regulation, public-private partnerships, software tools, procurement terms, and operational requirements, as well as agency ownership.

Definitions and Examples of MOD Business Models

Understanding the various MOD business models can help public agencies assess the transportation challenges that mobility services might help address. For more information on best practices for identifying business models applicable to public goals such as mitigating congestion, providing additional mobility for goods and services, providing mobility for user trips, providing mobility for people with disabilities, and providing mobility in different land use contexts, please reference the MOD Business Models Scenario Planning Template (FHWA-JPO-20-797) and MOD Business Models Synthesis Report (FHWA-JPO-20-798).

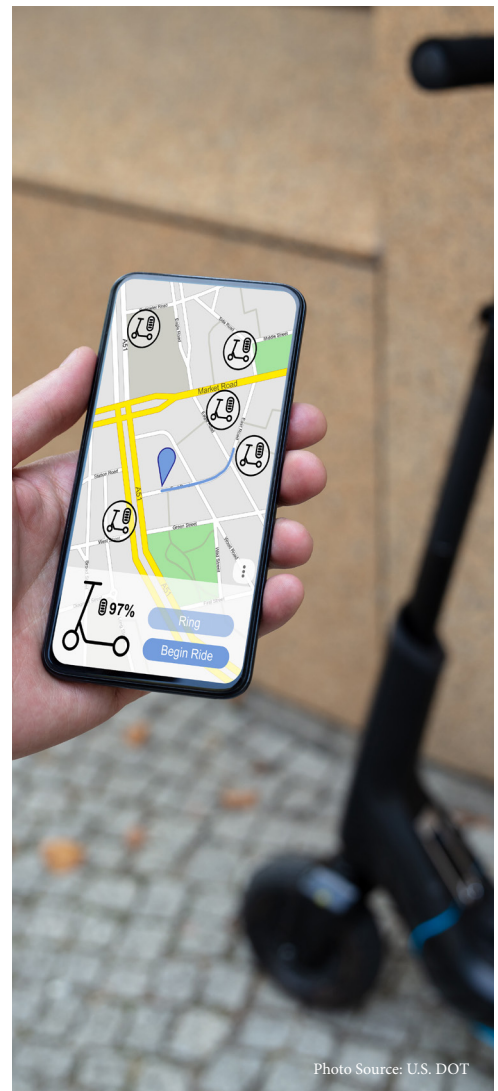| Business Model	Definition and Examples
Business-to-Consumer (B2C) Services	B2C services provide individual consumers with access to business-owned and -operated transportation services, such as a fleet of vehicles, bicycles, scooters, or other travel modes. These services are typically provided through memberships, subscriptions, user fees, or a combination of pricing models. **Examples:** Round-trip carsharing, free-floating carsharing, docked bikesharing, dockless bikesharing, scooters, ridesourcing, microtransit, traveler information/trip planning apps
Business-to-Government (B2G) Services	B2G services offer business-owned and operated transportation services to a public agency. Pricing may include a fee-for-service contract, a per-transaction option, or some other pricing model. **Examples:** Carsharing (government fleets or community partnerships), docked bikesharing, microtransit (e.g., licensing software)
Business-to-Business (B2B) Services	B2B services allow businesses to purchase access to business-owned or government-owned and -operated transportation services, either through usage fees or a fee-for-service. This type of service is typically offered to employees to complete work-related trips. **Examples:** Carsharing, bikesharing, and ridesourcing (business accounts), docked bikesharing (corporate campuses)

Photo Source: U.S. DOT

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| Business Model	Definition and Examples
Peer-to-Peer Mobility Marketplace (P2P-MM)	P2P-MM services offer a marketplace—usually as an online platform—to facilitate transactions among individual buyers and sellers of personally owned and operated mobility services, in exchange for a transaction fee. **Examples:** Peer-to-peer (P2P) carsharing and bikesharing services, ridesharing
Peer-to-Peer Goods Delivery Marketplace (P2P-GDM)	P2P-GDM services include courier network services, such as apps providing for-hire delivery for monetary compensation using an online application or platform (such as a website or smartphone app) to connect couriers using their personal vehicles, bicycles, or scooters with goods (e.g., packages, food). This can include two types of services: • P2P Delivery Services: P2P delivery services are apps that enable private drivers to collect a fee for delivering cargo using their private vehicles. • Paired On-Demand Courier Services: Paired on-demand courier services are apps that allow for-hire ride services to also conduct package deliveries. **Examples:** Food delivery and Courier Services Apps (shared mode or personal vehicles)
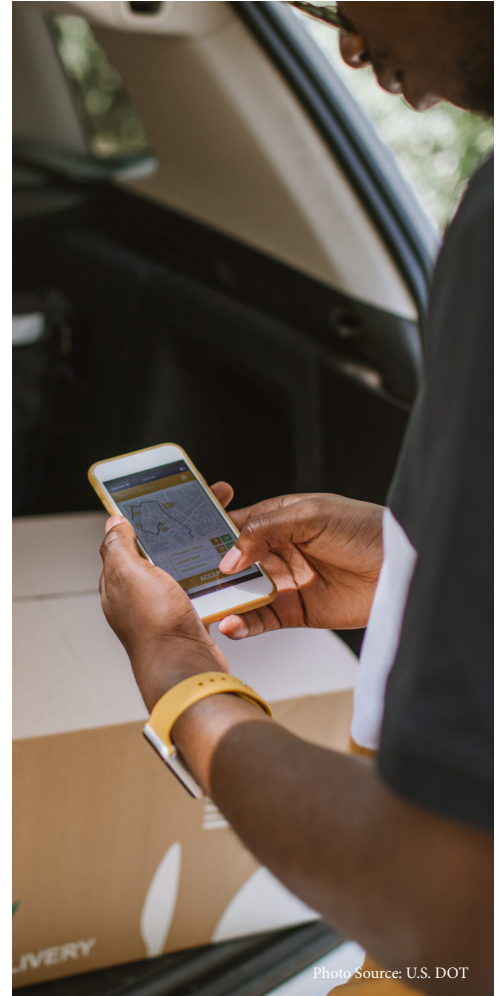
Photo Source: U.S. DOT

Learn more about the MOD program and related publications on the Intelligent Transportation Systems Joint Program Office website:

https://www.its.dot.gov/research_areas/mod/index.htm

For more information about this initiative, please contact:

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