DIGITAL TECHNOLOGY IN MOBILITY

Funding and asset levels are intrinsically linked. Can advances in digital technology help secure funding?

Words Boris Galonske **Images** Silverbergh Partners, Shutterstock

FUNDING GAMES

New mobility concepts are spreading. Some are driven by venture-funded startups; others are pursued by incumbents investigating new routes to market. So far, digital technology has played a pivotal role in helping to raise venture capital for typically asset-light platform businesses with the ability to scale quickly. Going forward, more asset investments are required to take mobility business models into the mainstream. This requires funding, and even though asset-light business models will continue to exist, asset owners need to be rewarded. Can digital technology support securing funding – or is it a hurdle?

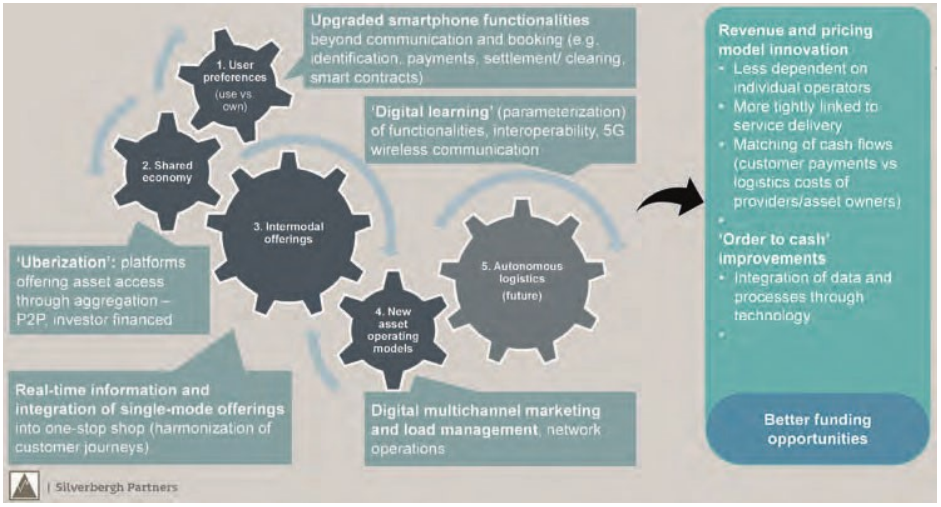
Transportation sector venture funding is dominated by companies organizing rides for customers. These types of companies (for example, Uber) include booking portals and white-label solutions, and have raised capital of US$68bn. Ranked second in terms of total funding received are smart mobility companies, which provide sustainable transportation solutions in cities and offer infrastructure (such as charging stations) and transport assets. By comparison, these companies have raised only US$37bn. Smart mobility companies exhibit much higher growth rates, however, with 21% growth (compared with 8% for booking platforms/white-label providers) observed in Q3 2018 (Venture Scanner, Q3, 2018).

Although asset-light business models have dominated the venture funding market, more asset-oriented types of companies are gaining venture funding market share. However, given the risks associated with new and evolving technology businesses, venture capital is, at times, offset by traditional credit and leasing schemes. Lowering and reallocating risks will open alternative, potentially lower-cost funds, especially as mobility businesses scale further, demanding even larger asset deployments.

How digital changes mobility

Digital technology is changing mobility. It is worth considering the digital mechanics of evolving mobility businesses (see Figure 1) and what they imply for tackling funding challenges.

First, user preferences are changing – from owning to using. Flexible asset



Above: Figure 1: Digital technology in mobility – a commercial perspective

Below: Specialist providers offering intermodal solutions are having an effect on mobility

The future in numbers...

A mobility IPO crossed the US$8bn threshold when Uber's May 2019 offering raised

US$8.1bn

access (such as car and ride sharing) often serves customer needs better than traditional asset ownership, which involves an obligation to operate and maintain/service the asset in a fixed location. At the same time, smartphone functionality is being upgraded and evolving into a 'digital twin' of its owner. As such, it evolves beyond a pure market/booking interface. It stores preferences; enables communication; and includes identification, payment function, and smart contracts (which settle and clear automatically) that can be linked directly to the individual. This functionality already exists in applications such as ride sharing and public transport, and enables users to source mobility in a timely way, according to their needs.

Second, the shared economy – traditional but shared asset operations. To cater to this evolving user preference profile, vendors organize asset access and operations either through asset-light or asset- and capital-intensive business models (stationary car sharing, for example). They also establish and operate the user/customer interface.

Third, intermodal offerings (bridging single-mode offerings). The true value in mobility comes with intermodal offerings. There are specialized providers bridging different modal requirements, such as Google (through Google maps) and SwissPass (a mobility, booking and service platform provided by Swiss Rail). This creates a one-stop shop for fulfillment of a transportation need, enabling the user to consult and coordinate across mobility providers.

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Fourth are new asset operating models (expanded scope through integrated multimodal offering). If multimodal integration through a market interface can be improved by bundling in-house complementary offerings, new business models evolve, as is the case with BlaBlaCar (ride sharing and coach) and Flixbus (coach and rail). Synergies become monetized – for example, in sales/marketing and operations.

Finally, autonomous logistics (future shift change in operating rationale and economics) enable quicker adjustment to changing demand patterns (if assets are not constrained) and aid in serving mobility needs that have a higher degree of individualization (such as through predictive analytics, swarm). Algorithms in line with legal frameworks ensure safe operations, and machine learning capturing consumer demand patterns will improve service and asset use over time. Not only can operations be automated, but the entire commercial process can be automated as well, requiring little intervention.

In summation, changing user preferences foster evolution of alternative and, to a large degree, asset-light digital mobility business models. These models aim to continuously expand operations and improve the integration of customer use data with financial data, which is a clear benefit in the raising of funds as mobility solutions are being built out.

How digital influences funding abilities

Currently, data integration (such as customer typologies, usage patterns

and traffic flows) is the basis for venture funding as market traction and network effects are expected to translate into revenues over time. This drives enterprise value, which again is the basis for further venture funding (growth capital). Technology is instrumental to ensuring seamless, accurate and timely data integration, which is now much easier to achieve than in the past – for example, through low-cost sensors; interconnectedness of customers, devices and machinery; broadband data transfers; and global electronic payment standards.

Going forward, more and new types of assets need to be deployed to fulfill mobility demand. The ability to integrate data throughout the end-to-end commercial process will help to secure funding for mobility asset investments beyond venture funding. As such, funding sources can be diversified. Data on customers, booking, operations and finances can be attributed to individual assets. As such, the credit quality of the arranger of the scheme becomes less important, because asset performance is key to earning back funds provided (equity and/or debt). However, there does need to be an assurance that cash flow is somewhat reliable and stable.

How digital helps manage risk

To improve stability of cash flow, risks need to be managed (see Figure 2). For each risk type, examples can be observed, showing how technology can be instrumental in managing cash flow volatility.

Market risk is key to any mobility funding scheme. Capacity oversupply versus actual demand needs to be avoided and a potential mismatch, even medium term, is a deterrent for several funding requests. There are, however, levers to relieve the provider of funds from that exposure by synchronizing demand/supply (at a clear price/price range) and delineating operations and asset ownership, or by establishing natural hedges (optional). For example, Kuehne + Nagel has established a sourcing platform using predictive algorithms and analytics to source shipping capacity. This helps the company to manage its market risk exposure.

Operational risk can be contained by integrating mature operational components into the operating model (hardware, software or processes) and by relying on senior sector and functional expertise. For example, white-label software platforms can be leveraged, such as for car-sharing operations (Need4Car, Ridecell). In terms of hardware, Rinspeed developed its Snap platform by integrating technology from well-known industrial partners (for example, Harman, NXP Semiconductors, SAP, Osram), providing assurance that these technologies or components will work.

Counterparty/credit risk can be managed by building a diversified cash flow stream – for example, through a diversified customer portfolio and booking platforms; partnering with strong and reliable companies to provide technology, market access, flow business/revenue streams; and pricing credit risk better than in the past. As an example, there is a new breed of companies that have developed credit-rating methodologies based on social media data and big data analytics. They can make almost real-time credit decisions based on their methodology (examples include PayU and Kreditech).

	Challenge for funding	**How mobility and logistics businesses respond** (examples)
Market risk	Financial commitments (OPEX and CAPEX) **do not pay back** as market (or market traction) does not develop as expected	- **Synchronization of asset life** with operating commitment - **Delineation of asset ownership** and operating obligation - **Creation of natural hedge** (alternative use of assets)
Operational risk	Weak processes or errors lead to **follow-on costs** (for example, requires customer compensation, technology fixes, regulatory costs)	- **Firm up processes** (but maintain entrepreneurial spirit) - **Integrate mature tech components** (hardware and software as available) - **Upgrade/hire skill set**
Counterparty/credit risk	Counterparty does not adhere to **commitments** (for example loss of operating license, guarantees, delivery promise, payments)	- Procurement (**choose stable suppliers** with track record) - Sales side: **diversify** (retail) versus **reduce/price** (B2B) - **Require collateral** (where appropriate)
Financial risk	Risk associated with exposure to financial markets	- According to risk appetite **hedge and/or pass through** and price (for example, fuel, FX, interest)

Above: Figure 2: Mobility businesses – approaches to managing earnings volatility

Below: Changing user preferences also impact upon the application of digital solutions

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Financial risk is associated with exposure to markets. These exposures could be hedged depending on the respective risk appetite, using financial instruments, but could also be neutralized if the exposure is passed through.

For example, airlines levy fuel surcharges when oil prices are high. The surcharges are parameterized and automatically added to the fare. This helps protect the operating margin (as fuel is a major cost component) and improves the operating margin baseline as oil prices come down.

Catalyzer or hurdle?

Clearly, capabilities and technology expertise of mobility businesses accumulated in the venture stage can be instrumental in managing future funding challenges. Digital technologies employed today do not only substantiate new mobility business models, but also offer new opportunities to manage cash-flow volatility and to link cash-flow streams to assets. As such, they are a catalyzer rather than a hurdle for funding, assuming technology risks are ironed out. If this is achieved, mobility businesses will be able to diversify and raise new funds. It will also enable them to layer on selected assets to today's asset-light business models. ✣

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Boris Galonske, managing director of Silverbergh Partners, will present *The journey toward autonomous mobility – a financial perspective* on December 10 as part of **STREAM 3: Changing Landscape for the Automotive Industry** at this year's The Future of Transportation World Conference
www.thefutureoftransportconference.com