Lufthansa
Innovation Hub

The Travel and Mobility Tech Sector Attractiveness Report

The state of Travel and Mobility Tech

The Travel and Mobility Tech sector has arguably been going through its most turbulent time in history over the past three years.

In 2020, the pandemic brought the world to a sudden halt.

The travel industry, in particular, suffered dramatically. Across the globe, travel plummeted by an estimated 70%. This resulted in a roughly $1.3 trillion USD loss in revenue for tourism-related industries, such as transportation, accommodation, and food services.

These losses were particularly severe for countries that rely heavily on international tourism for their GDPs. In 2020, destinations such as Thailand, Spain, and Greece experienced losses of 86%, 84%, and 78%, respectively.

Meanwhile, the pandemic has changed the way we interact with our environment, as well as how we navigate through it. We analyzed mobility behavior and learned that the preferred modes of getting around town changed significantly. This was due to fears of infection coupled with social distancing guidelines. Consequently, the usage of public transportation and ride-hailing, for example, dropped significantly. The reasoning is straightforward: the pandemic has made sharing a train or car with strangers far less appealing.

On the other hand, micromobility modes, such as bike and e-scooter sharing as well as car-sharing, proved to be crisis-resilient, with app usage returning to or even outperforming pre-pandemic levels by late 2020. However, private car usage trended upward with the onset of the pandemic. Such a scenario isn't exactly great news during a time when the world is steering towards cleaner transportation. The private car is one of the most polluting transportation modes.

In 2021, the travel industry recovered slightly but continued to face pandemic-related disruptions. These upsets spanned from new covid variants, which resulted in travel bans and restrictions, alongside changing customer behavior. People increasingly turned towards domestic tourism options, preferring “staycations” over trips abroad.

During this time, airlines mostly stuck to limited flight schedules that had been implemented in 2020 and relied on new safety protocols, such as mandatory face masks and contactless check-in and boarding processes. Hotels implemented similar policies that included social distancing and enhanced cleaning measures. As well, the shift towards virtual experiences further increased. This included virtual tours and digital events, which kept travelers engaged when they could not physically travel.

In early 2022, when Travel and Mobility Tech providers hoped for a return to normal, a new challenge arose. In hindsight, the problem appears obvious. However, it still turned out to be a surprise. Rising inflation rates that led central banks to raise interest rates resulted in a stock market crash, marking the end of the decade-long tech rally that benefited many technology companies in the Travel and Mobility Tech context.

For over a decade, we witnessed cheap money supply and rising valuations across the tech sector. Then, suddenly, stocks plummeted, wiping out billions of dollars in investment capital and causing widespread panic among investors. This crash had a ripple effect on most markets around the world, including Travel and Mobility as we show in our TNMT Market Index. Investors rushed to sell growth stocks and moved money into less risky assets, such as cash or gold.

The market cool-off has caused massive unease in the innovation ecosystem. For Travel and Mobility Tech startups, early 2022 felt like it could be the year when the economic consequences of the pandemic were finally overcome. Undoubtedly, this has been the case for certain travel and mobility subcategories. For example, the travel fever that ignited this past summer greatly benefitted airlines. However, the new macro environment poses a lot of uncertainty, especially for future innovators in our sector that depend on Venture Capital to bring their radical disruptions to life.

Given these turbulent times, it is an opportune moment for us to take a holistic look at the current state of Travel and Mobility Tech. This is important as we head into 2023.

Specifically, we want to shed light on changing innovation dynamics in the Travel and Mobility Tech landscape. As the new year approaches, we ask ourselves:

→ How do we anticipate the overall travel industry to recover in 2023?

→ What is the current state of the Travel and Mobility Tech startup ecosystem, especially given current macro dynamics?

→ What are some interesting travel innovation areas we will see emerge in the years to come?

This report provides initial answers to some of these questions. We illustrate how the last few years have impacted startup financing and opened up new opportunities. These opportunities are based in segments that investors, innovation managers, and startup founders should pay close attention to.

If you want to learn more about the reasoning behind these trends and charts, please sign up for our free bi-weekly TNMT Newsletter. In this newsletter, we regularly discuss major events in Travel and Mobility Tech in greater detail.

If you are interested in previous analyses decoding the Travel and Mobility Tech ecosystem, please visit our archive of trend reports, which includes, for example, our 2021 Trends Report.

We want to keep the report as brief as possible. As a result, we narrowed our findings down to the five most important data charts. These charts provide a bird’s eye view of the current industry health and a glimpse at some of the hottest startup sectors in Travel and Mobility Tech.

Insight #1: Travel demand is almost back

To kick off our analysis, it's important to look at the underlying dimension of general travel demand, which is best measured through air traffic passenger volume. If people are unwilling to travel, it's meaningless to speculate about future innovations changing how we travel from A to B.

Based on air traffic passenger volume, we're currently seeing a slow but steady return to pre-pandemic levels. This travel activity increased significantly in 2022, given that most social distancing and travel restrictions have been lifted worldwide. There are some exceptions, of course, such as China, where international air traffic is still down more than 60% in mid-December 2022 vs. the same period in 2019, according to OAG.

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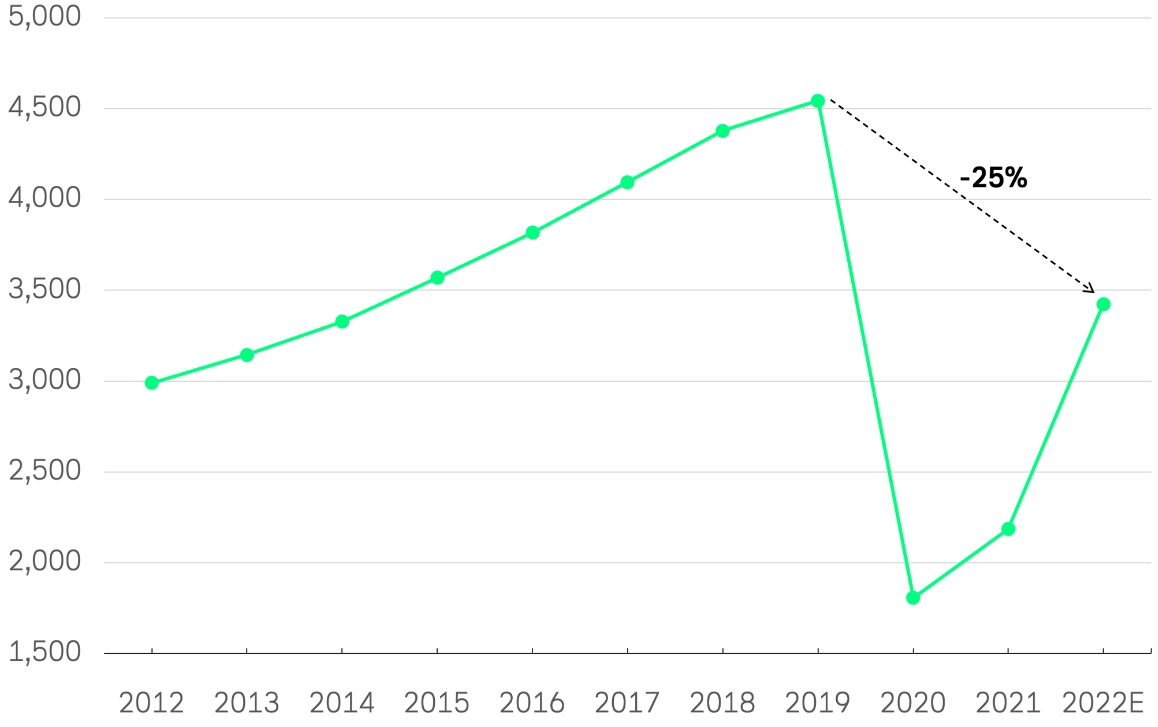
Air traffic passenger volume slowly progresses to pre-pandemic levels

Number of scheduled airline passengers (globally, in million)



Source: Lufthansa Innovation Hub analysis for TNMT.com based on data from Statista, IATA, ICAO, Airfinance Journal (Airline Analyst), Refinitiv, S&P Global Platts

As we look forward to 2023, we anticipate that booking numbers will increase beyond 2022 levels. We have more than one reason as to why we believe this will be the case, even though the looming recession could seriously challenge our prediction.

Once China lifts the pandemic-related restrictions, we anticipate that the country will have its own revenge travel phenomenon. In fact, we are not alone in our belief that China will reopen. IATA believes prominent Asian destinations will accelerate overall travel recovery. Mainland China is the last major market with severe COVID-19 entry restrictions.

Undoubtedly, there are growing concerns that inflation will impact the travel industry. While this is the case, we see more positive signals than negative ones regarding consumers' willingness to spend money on travel. For example, this analysis of major US credit card networks Visa and Mastercard concludes that, thus far, economic uncertainty hasn't thwarted consumer travel demand. Furthermore, research house Euromonitor estimates that global inbound tourism spending, which is set to grow by a stellar rate of 88% in 2022, will continue its upward trajectory in 2023.

Insight #2:
Funding in travel and mobility startups is down, but not worse than the broader VC market

Global travel demand will likely return to pre-pandemic levels. With this in mind, let's take a closer look at the startups in the Travel and Mobility Tech ecosystem. How exactly have these upcoming innovators fared in 2022? And what might we anticipate as far as technological innovations go in the coming year? For starters, we can delve deeper into overall Venture Capital investments in Travel and Mobility Tech startups.

Given the new macro environment, it is no surprise that most VC firms have tightened their belts this year. The same is true for funds focusing on travel and mobility-related startups.

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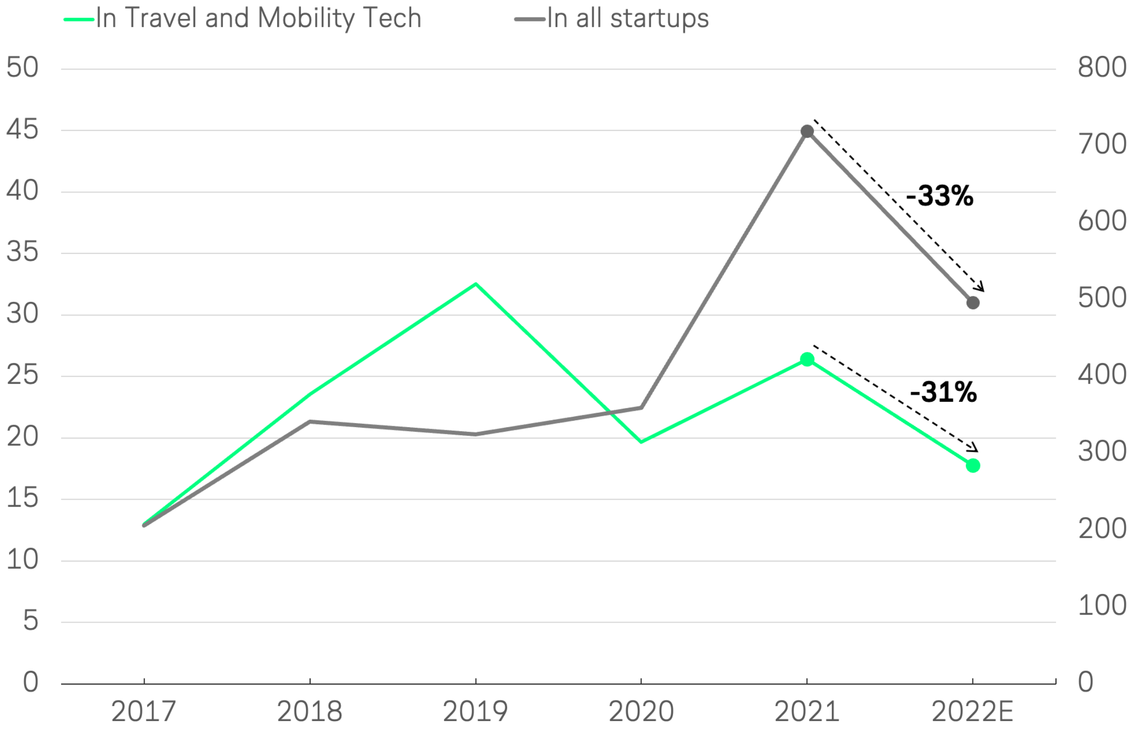
Travel and Mobility Tech declined in line with broader startup market

Global VC investment value (in billion USD)



Source: Lufthansa Innovation Hub, TNMT.com, PitchBook Data Inc.

In fact, in the Travel and Mobility Tech context, funding levels in 2022 dropped to the lowest level since 2018. Overall, less than $20 billion USD has flowed into startups shaping the future of travel and mobility.

However, when we compare this decrease in funding to overall investments in all of Venture Capital across all kinds of segments, this drop isn't specific to travel and mobility. Rather, overall VC dollars decreased by more than 30% compared to 2021. With this in mind, it is clear that the figure is near exact to that of Travel and Mobility Tech.

There are several underlying reasons for the general market cooldown, which include rising interest rates, high inflation, lower liquidity, lower public market valuations, and a dead IPO and SPAC market across industries. A recent PitchBook survey found that geopolitical uncertainty and related market volatility are concerns for most VC firms, too.

As interest rates increase, so does the cost of capital. In turn, deals must satisfy a higher return hurdle rate to be attractive to investors vis-a-vis alternatives. This prices riskier startups out of the market. Two years ago, with the cost of capital at near zero, almost any venture was fundable. Now, “riskier” ventures face much greater scrutiny.

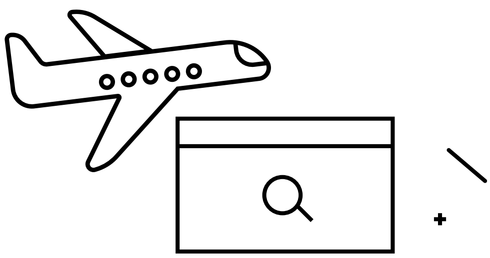
The +30% funding drop in 2022 must be further contextualized. While this drop sounds massive, 2021 was an outlier in terms of VC funding on a global scale as well as in Travel and Mobility Tech.

Globally, 2021 was a booming startup year due to several “boiling-hot” verticals, such as FinTech, SaaS, and eCommerce, all of which experienced major (temporary) valuation step-ups. This was due to the expansionary fiscal and monetary response to the pandemic that fueled a speculative bubble. With the cost of capital at 0, the riskiest assets were bid up the most, and FOMO among investors fed on itself—a situation that is now reversing.

Despite this, VC funds are still betting on and investing in the Travel and Mobility Tech sector. With nearly $20 billion USD of VC funding in 2022, there is still a significant amount of money being poured into our sector’s startup ventures.

On top of this, there are optimistic sentiments for 2023 in VC dynamics being expressed. This is due to the belief that the funding downturn may be transitory. In fact, $290 billion USD of dry powder might re-energize the startup market in 2023. Therefore, our outlook for the year ahead, as far as VC funding for Travel and Mobility Tech startups goes, is rather bullish.

For more established tech grownups, ones that have already proven product-market fit (or something close to it), things look more promising, as long as they can demonstrate a credible path toward profitability. However, a specific startup segment in Travel and Mobility Tech will have a hard time getting off the ground, which brings us to the third insight of this report.



Insight #3: Investors carefully place bets on young startups

Last year, we identified an accelerated trend in our annual Startup Funding Analysis, which found that early-stage companies have a tough time raising capital.

As illustrated in the chart below, early-stage deal activity further cooled off in 2022. It appears that investors continue to stabilize their existing portfolio companies with follow-on financing rather than betting money on the next generation of potential game-changers, indicated by the growing level of late-stage activity.

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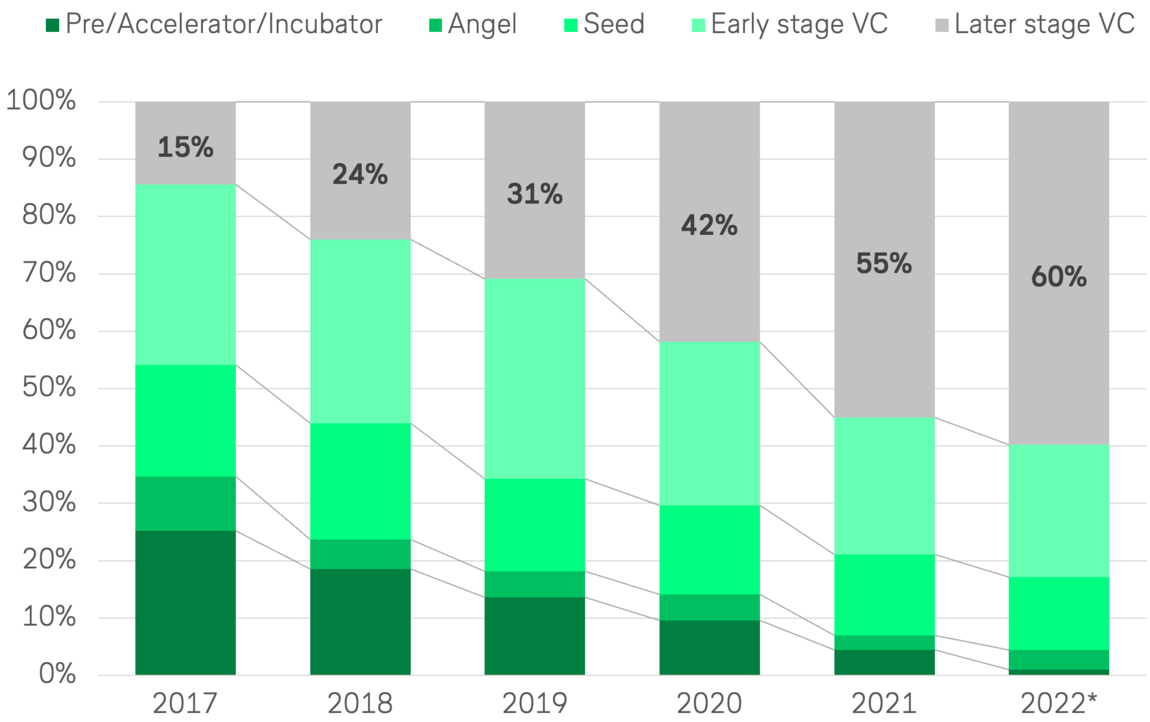
Investors get increasingly hesitant to place bets on younger startups

Share of VC deal count by deal stage in Travel and Mobility Tech



Source: Lufthansa Innovation Hub, TNMT.com, PitchBook Data Inc.
*Data as of October 1st, 2022

Why is this the case?

Unsurprisingly, the pandemic and its associated economic losses, the unclear recovery trajectory of the Travel and Mobility Tech industry, and the latest downturn have together alienated investors and triggered rising risk aversion.

In summary, VC funds are tightening their belts and saving up the “dry powder” necessary to back more established companies in their portfolios in the years to come. In the Travel and Mobility Tech context, this phenomenon is particularly pronounced, given that the industry suffered tremendous losses during the pandemic and has yet to recover fully.

> **Tough times put investors into triage mode. Mature startups with proven business models and the potential to reach the public markets within a few years will be the safest place to park any new venture capital that comes into the ecosystem.**
>
> **Micah Rosenbloom**, Harvard Business Review

At the same time, the growing share of late-stage deals in Travel and Mobility Tech also signals a maturing industry.

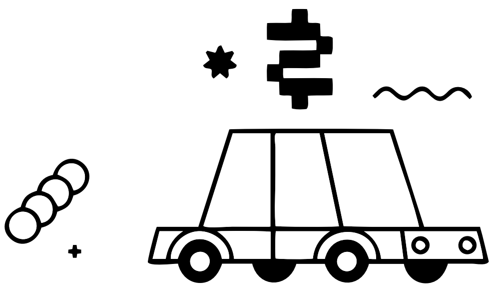
Why exactly is this the case?

Well, most tech sectors saw a sudden decrease in VC dollars in 2022. For Travel and Mobility Tech, this situation was not new. In fact, a slowing funding environment set in already two years before when the pandemic hit in 2020. At the time, the global movement of people reached a near standstill, bringing VC investments into travel-related startups to a sudden halt.

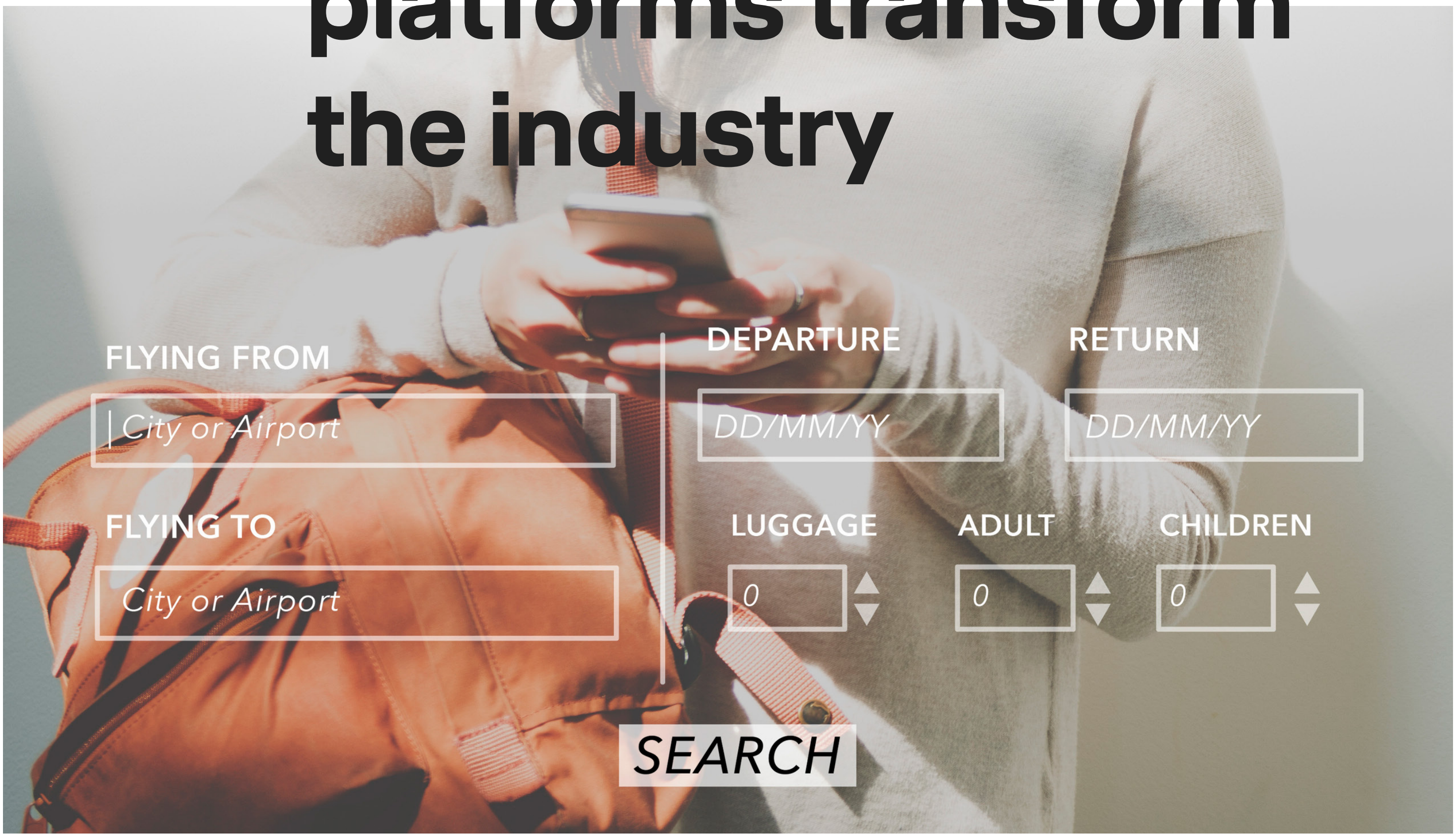
Given this, the early-to-late-stage funding shift in Travel and Mobility Tech took place much earlier and has lasted for significantly longer. As a result, things have been tougher for up-and-coming ventures in our sector than others. In 2022, 60% of all deals in Travel and Mobility Tech were funding events of late-stage companies. This share is up from only 15% back in 2017.

On the bright side, the remaining 40% of early-stage Travel and Mobility Tech startups that managed to raise funding in 2022 are of a higher caliber. These companies have passed the major hurdles of collecting early-stage VC dollars in turbulent economic times.

With all this in mind, let's take a closer look at the most promising early-stage companies in Travel and Mobility Tech that might innovate our sector in the future. This brings us to Insight #4 of our report.



Insight #4:
Next-Gen Search, Inspire, and Booking platforms transform the industry



Amid the economic downturn, some companies in Travel and Mobility Tech have successfully obtained early-stage VC funding. Let's dive deeper into these startups that made the cut.

Interestingly, when we look at the four major segments in Travel and Mobility Tech with the highest share of early-stage deals over the past year, Search, Inspire, and Booking (SIB) platforms stand out.

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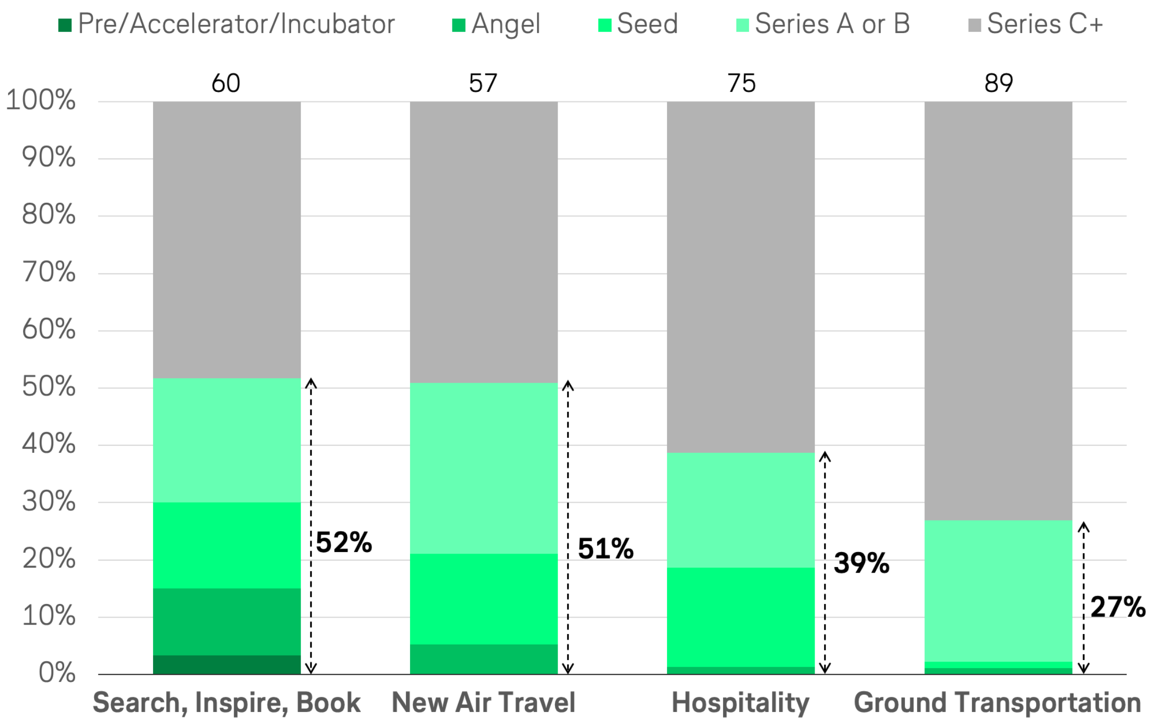
Search, Inspire, Book Platforms attract most early-stage interest

Share of VC deal count by major category in 2022*



Source: Lufthansa Innovation Hub, TNMT.com, PitchBook Data Inc.
*Data as of October 1st, 2022

With 52% of deals being early-stage, SIB as a category attracted the highest share of early-stage funding frequency across major sectors in Travel and Mobility Tech. SIB is the category in which we anticipate the most transformation to take place over the next few years.

This trend represents an unexpected insight, given that SIB platforms have long lost traction in Travel and Mobility Tech. As we outlined in our 2021 Startup Trends report, SIB dominated Travel and Mobility Tech more than ten years ago, during the first stages of the internet and tech era.

Back in 2010, more than 60% of all VC dollars in Travel and Mobility Tech were allocated to one form of booking platform or another, such as meta searchers. Since then, the share of funding for SIB within Travel and Mobility Tech has steadily decreased, dropping to just 11% in 2021.

The strong presence of early-stage startups in the SIB segment in 2022 is an interesting trend. There were few early indications that this would be the case, except for some of the well-known SIB startup outliers that have made a splash in recent years, including corporate travel management platform TripActions or Indonesian travel and ticketing platform Traveloka.

With so little of a heads-up, the question remains: What fuels the return of Search, Inspire, and Booking platforms? The answer is: changing travel behaviors alongside new consumer preferences and attitudes towards travel. With all this in mind, we are ready for our fifth and final observation.

Insight #5: New travel behaviors open up a range of emerging opportunities

“Unprecedented” has been an exceedingly popular term to describe how the pandemic has affected our lives. And it certainly hits the nail on the head. The way we travel from A to B has changed dramatically, and with it, consumer behavior.

How exactly has this happened?

Well, the lines between leisure and business travel, for example, have been muddied, and a new era of Blurred Travel has arrived. People are more interested in blending the two together whenever they choose to travel abroad. There has also been an anti-mass tourism movement, which has expanded the longtail of travel packages and offerings.

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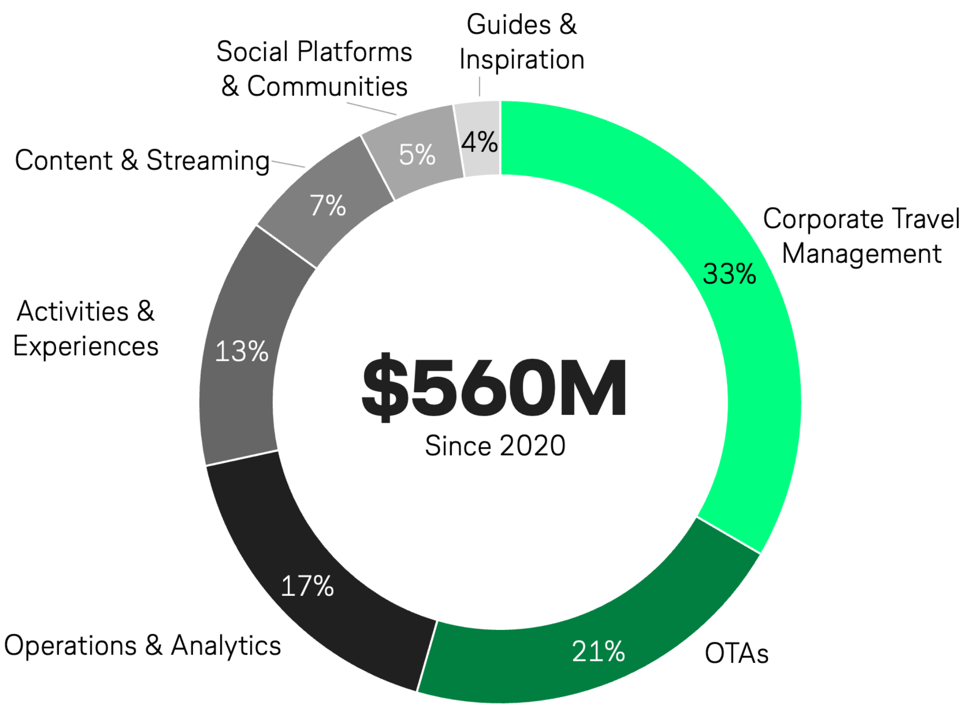
Corporate Travel Management and OTAs raise most early-stage dollars

Share of VC deal value in Search, Inspire, Book by subcategory



Source: Lufthansa Innovation Hub, TNMT.com, PitchBook Data Inc.
*Data as of October 1st, 2022

On top of these shifts, sustainability concerns have been on the rise, which have been further accelerated by the pandemic. Such concerns have changed the way people search and filter potential travel destinations as well as flights, accommodations, and activities. Together, these developments in consumer behavior have triggered startup founders to be innovative when it comes to the offering of travel services.

The aforementioned insight on the rise of SIB platforms evidences these shifts in consumer behavior. So, let's zoom in on the most active early-stage sub-categories within the Search, Inspire, and Booking Platform category in Travel and Mobility Tech: Corporate Travel Management and Online Travel Agencies.

As you can see in the chart above, Corporate Travel Management and Online Travel Agencies (OTA) have raised the majority of early-stage funding within SIB. Since 2020, more than 50% of all early-stage dollars within SIB were raised by these two categories. Let's briefly look at both segments in more detail.

While the **corporate travel sector** won't return to pre-pandemic levels in terms of market size anytime soon, the sector is evolving and adapting to a new reality.

This reality consists of changing travel policies, the rising need for corporations to track and limit their GHG emissions caused by corporate travel activity, and the ongoing mega trend of remote work that is reimagining the way corporate travel is managed and organized. In fact, entirely new markets are emerging. This has taken place, for example, in the case of online booking platforms for corporate offsite events like Cloopio (a Lufthansa Innovation Hub venture).

As a result, corporate travel management has become attractive for startup founders and investors alike.

The OTA segment, on the other hand, is going through its own transformation.

Funding to early-stage OTA startups is four times higher in 2022 than it was in 2020. So, what is causing this trend? Again, changing travel behavior is the underlying force.

Let's take a look at two concrete examples.

There is the so-called **"Communities Define Demand,"** which has gained major traction over the past two years. This trend refers to consumers increasingly basing their (travel purchase) decisions on their values, norms, and beliefs, a phenomenon that is slowly replacing price as the primary deciding factor. Examples of this trend can be found in medical travel, ecotourism, and religious-related travel activities.

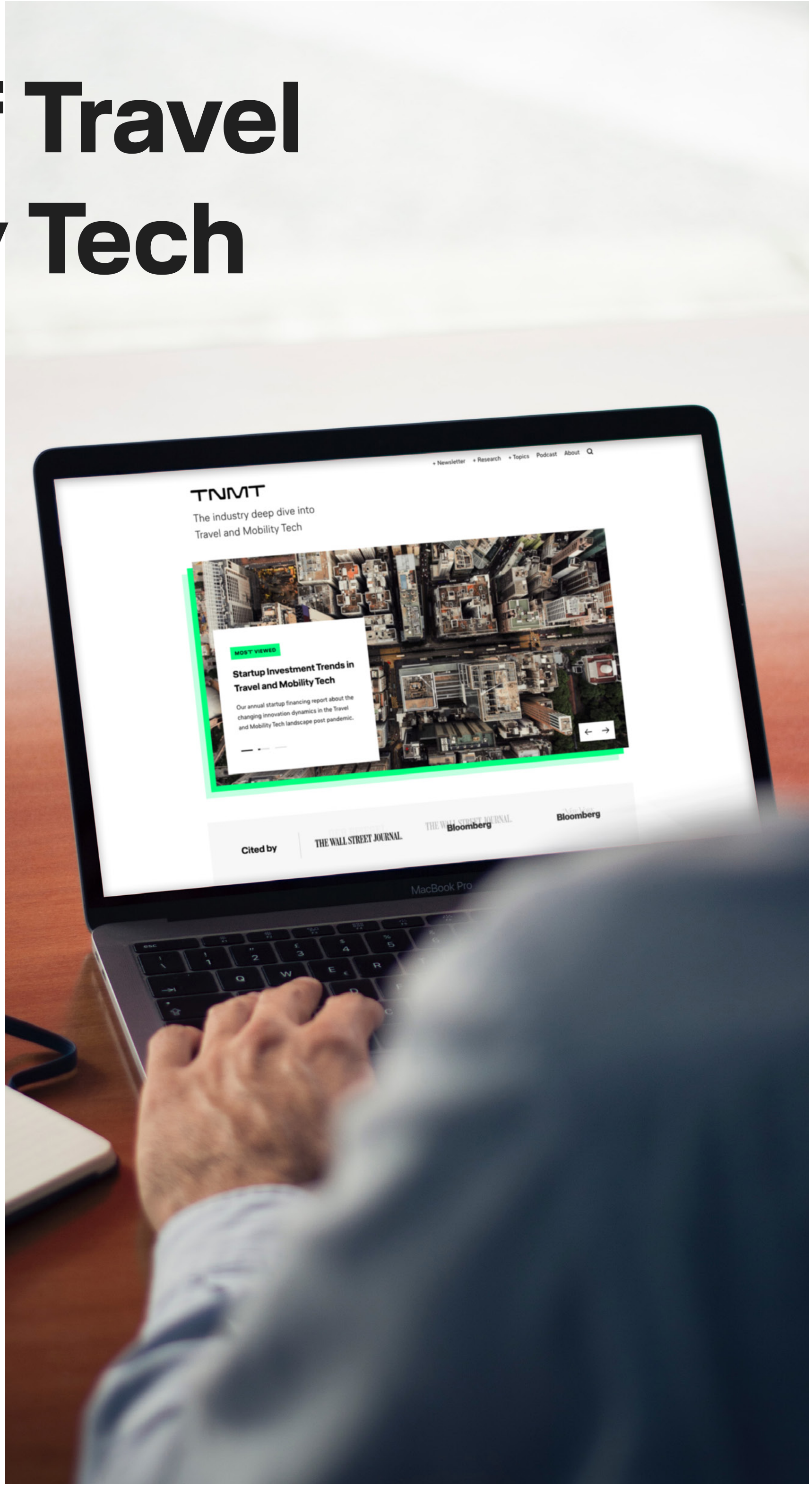
A second example is the so-called **"Embedded Travel."** This refers to the fact that today's technologies and internet platforms enable endless points of sale for travel inspiration and booking that can happen anywhere and at any time. Such a point of sale could come in the form of bookable content that is embedded directly in social media. So, imagine a travel video as part of a live-streaming session. Viewers can not only watch but directly book travel in a given social app, whether on Instagram, TikTok, or another platform.

With all this in mind, our analysis only scratches the surface of what these trends might mean for the future of the Travel and Mobility Tech industry.

For further deep dives, please sign up for our bi-weekly TNMT Newsletter, in which we regularly discuss and analyze the hottest trends in Travel and Mobility Tech.

Definition of Travel and Mobility Tech

The data in this report is based on a comprehensive startup database by the Lufthansa Innovation Hub. It contains all relevant companies with a technology component offering search, inspire, and booking services as well as travel planning, on-demand travel sites, urban mobility (e.g., ride-hailing), tourism and hospitality (e.g., alternative housing) along with specific niche segments such as travel support (e.g., virtual assistants), enterprise travel, and travel-related data analytics. We consider both B2C and B2B startups with an initial proof of concept (usually indicated via a disclosed VC backing).



Authors

Anna Schneider
Research & Intelligence Analyst

Dr. Ivan Terekhov
Director Research & Intelligence

Sven Kämmerer
Chief of Staff

Lennart Dobravsky
Editor-in-Chief

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