



Lufthansa  
Innovation Hub

# Report

# Trends in the Virtual Work Startup Ecosystem



# Introduction



During the Covid-19 pandemic, most knowledge workers experienced an abrupt shift to work-from-home, and the growth of virtual work companies skyrocketed.

At the same time, air passenger traffic reached its lowest levels of the millennium. Business travel came to a near standstill. In 2021, mobility restrictions are loosening, and travel is slowly returning. However, the shift to virtual work will continue—even when the pandemic eventually concludes.

The big question remains: What parts of business travel will return, and which will remain virtual? Virtual work startups such as [Hopin](#), [Gather.town](#), and [mmhmm](#) are already disrupting business activities such as travel for corporate events, networking, and client meetings.

To better judge the long-term impact of the virtual work revolution on workplace dynamics and the resulting corporate travel activity, this report analyzes the ecosystem of over 250 relevant startups that offer virtual solutions bridging physical and virtual business interactions.

By providing virtual alternatives to standard business activities, these startups undermine the need for people to meet in person and thereby reduce the need for business travel.

Our goal with this report is to provide an overview of the startup dynamics in the Virtual Work market by analyzing Venture Capital investment trends where these players are concerned. We also provide a framework for travel companies to evaluate the impact of different virtual work categories on their business activities.

# Who we are



This report has been created by the Lufthansa Innovation Hub with the support of Dealroom.

## The Lufthansa Innovation Hub

The Lufthansa Innovation Hub (LIH)—named “Germany’s Best Digital Lab” by Capital Magazine—is the digital transformation spearhead of the world’s largest aviation corporation, the Lufthansa Group.

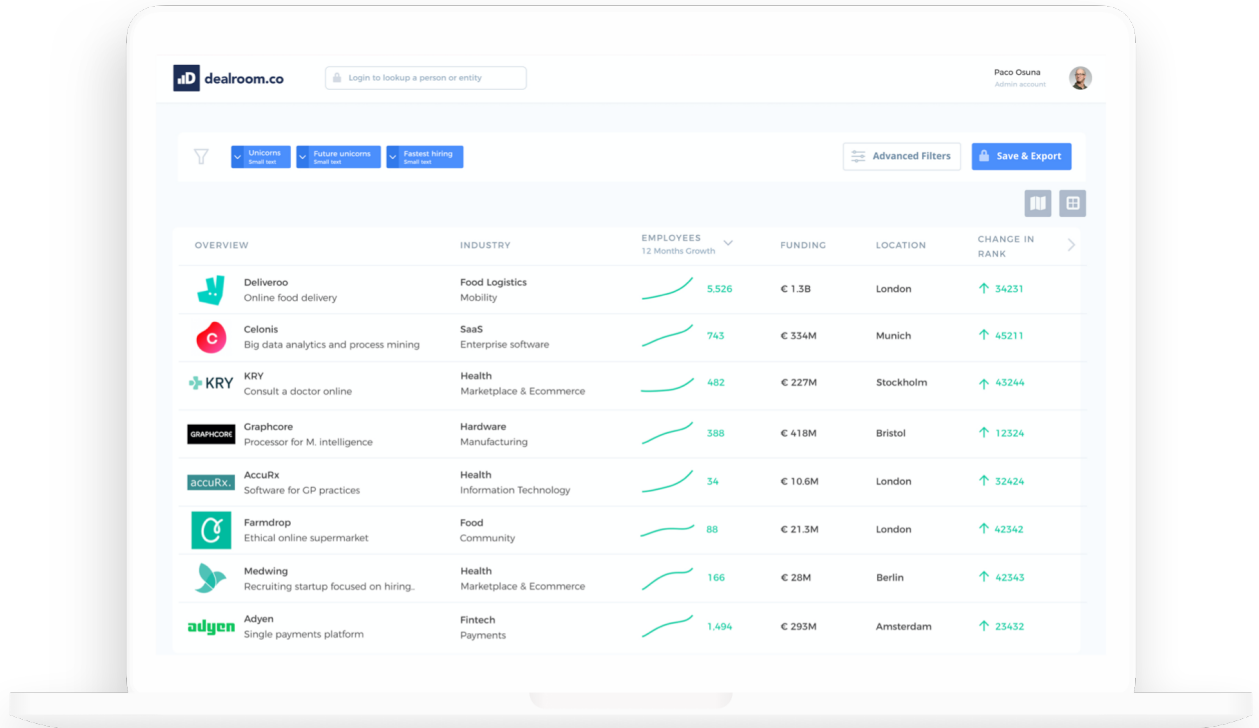
The LIH discovers, evaluates, and implements new digital business opportunities in the context of Travel and Mobility Tech with industry-leading airlines such as Lufthansa, Eurowings, SWISS, and Austrian Airlines, the frequent flyer program Miles & More, as well as other renowned Lufthansa Group entities.

Our mission is to create and capture value beyond flying. To do this, we invest in startups, initiate partnerships with startups, and most importantly, incubate new digital services and products ourselves. To learn more, visit the [LIH website](#) or stop by our [LinkedIn page](#).

In our work, we always follow the credo, “data beats opinion.” We want to act on facts rather than beliefs. That’s why exploring the Travel and Mobility Tech ecosystem is the crucial foundation on which all of the Lufthansa Innovation Hub’s activities are built on.

Our insights are regularly shared on our dedicated market intelligence platform, [TNMT](#).

# About Dealroom



Dealroom as the exclusive data provider of this report is a global startup & venture capital intelligence platform.

[Dealroom.co](https://dealroom.co) is the foremost data provider on startup, early-stage, and growth company ecosystems in Europe and around the globe.

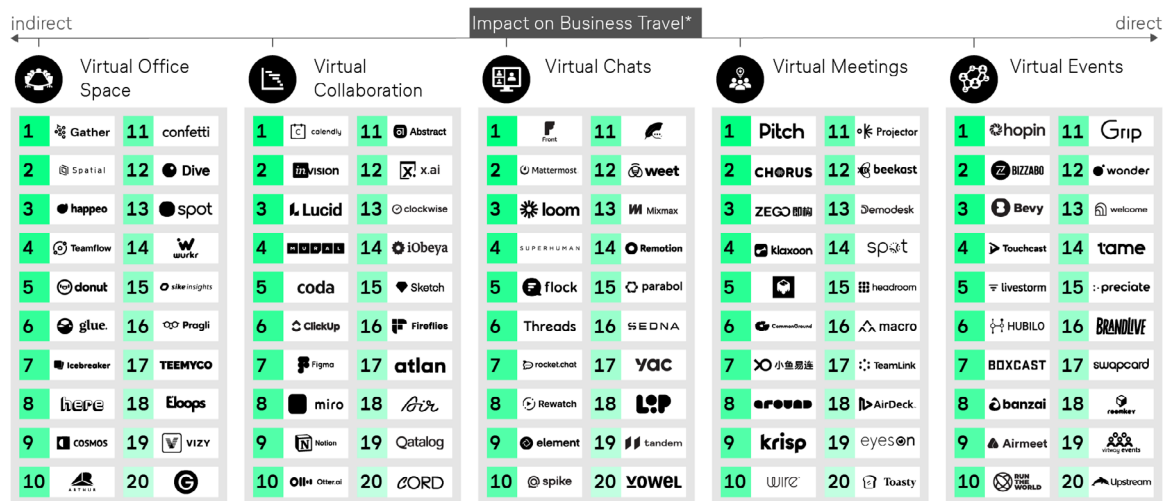
Founded in Amsterdam in 2013, Dealroom works with many of the world's most prominent investors, entrepreneurs, and government organizations to provide transparency, analysis and insights on venture capital activity.

# Approach

TNMT

## The 100 virtual work startups challenging business travel

Startups ranked by VC funding received



Lufthansa Innovation Hub, TNMT.com, Pitchbook

Updated on 03.06.2021

To find all the relevant startups in the global virtual work ecosystem, we scouted hundreds of relevant players and categorized them based on their primary business focus. These include virtual events, virtual meetings (i.e., presentation and interaction tools), virtual chats (i.e., text messaging and video chats), virtual collaboration (i.e., knowledge sharing, content creation, and workflow alignment), and virtual office space (i.e., digital alternatives to office buildings and department floors). For a more detailed overview of all startup categorizations, please refer to the [interactive Dealroom Landscape](#).

To be able to do so, we utilized the Dealroom platform, which offers an extensive venture capital database built upon machine learning and data-driven information harvesting.

Given the fact that our startup scouting coverage is better in Western countries than elsewhere, especially Asia, we also reached out to local experts where needed.

The focus of this report is exclusively on second-generation virtual work startups that are defined by an augmented, immersive solution bridging the gap between physical and virtual interactions, compared to the first generation of teleconferencing tools spearheaded by, for example, [Zoom](#), [Skype](#), and [Slack](#).

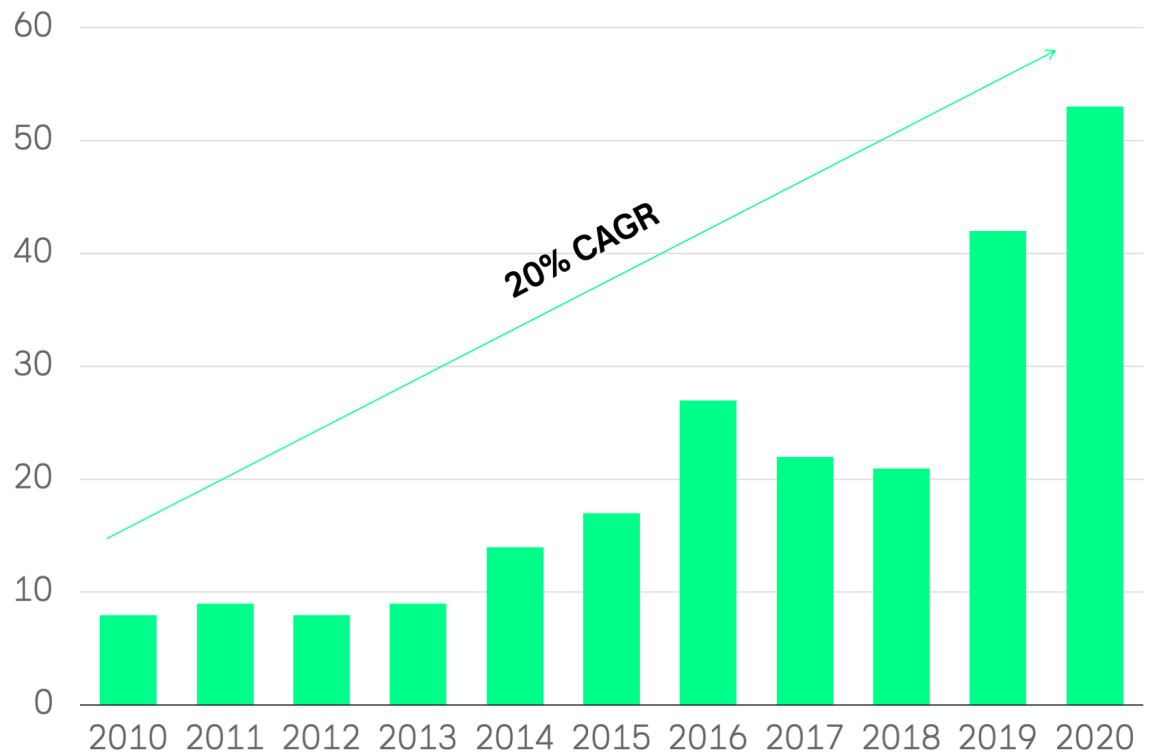
Furthermore, these startups address a business need that was often a reason for a business trip in pre-Covid times. Hence, startups that offer purely HR, legal, or back-office technology are excluded from our analysis.

#1

TNMT

# The virtual work mega-trend started long before the pandemic

## Number of newly founded virtual work startups globally



Source: Lufthansa Innovation Hub, TNMT.com, Dealroom

As demonstrated by the number of virtual work startups founded globally over time, virtual work has been a mega-trend long before the Covid-19 pandemic. Zoom, for instance, the company that became synonymous with the 2020 virtual office shift, was founded back in 2011, while Skype dates back to 2003.

The first significant spike in startup founding activity occurred in 2016, and can be largely attributed to the growth of the so-called knowledge economy—the concept of more flexible and remote work schemes pioneered by companies such as GitHub and Google, propelled by the availability of more reliable and cost-effective software solutions. The growth reached

another high in 2019, driven by changing workforce demographics with digitally-native [Gen Z workers increasingly entering the labour market](#) along with the [increased participation of female workers](#) during this time. Both demographics are advocates for more flexible and virtual working arrangements.

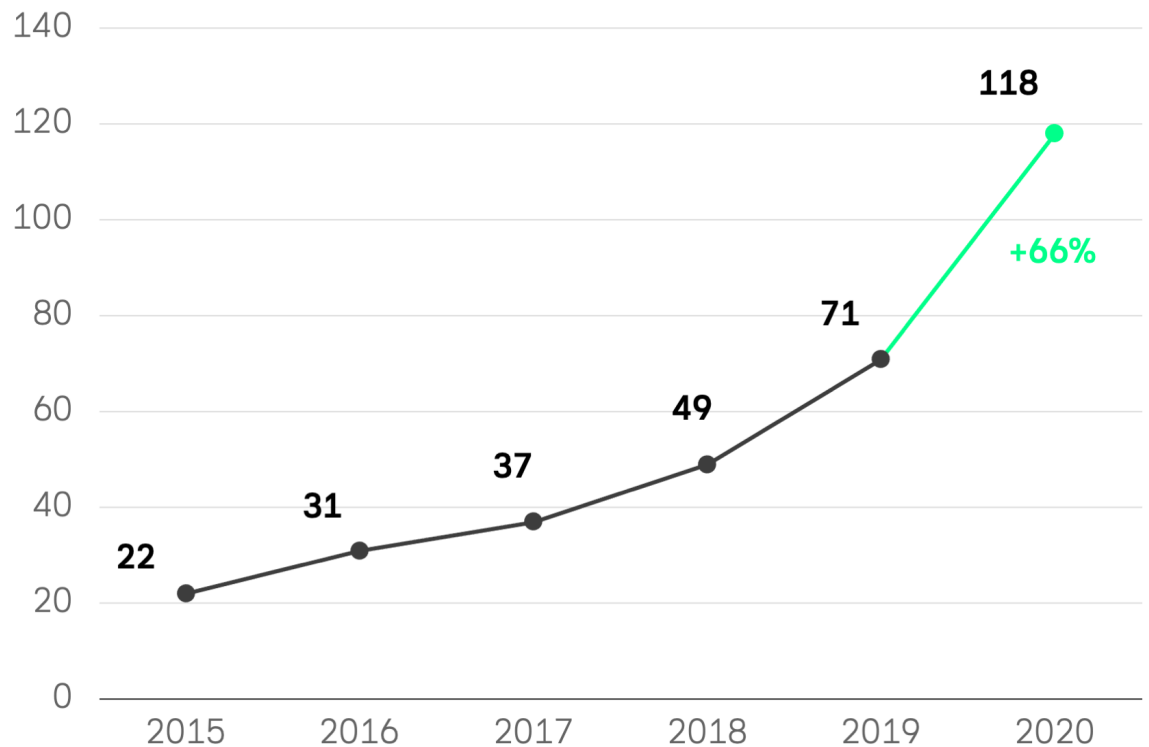
Covid-19 provided another startup adoption launching pad on top of already accelerating founding dynamics. A new record number of startups were founded in 2020, but the true effects of the pandemic on founding dynamics are likely even higher due to an unavoidable lag in tracking and reporting of most recent startup findings.

## #2

TNMT

## Highlighted by the pandemic, investors intensify funding

### Number of VC deals in virtual work startups



Source: Lufthansa Innovation Hub, TNMT.com, Dealroom

The boost in founding activity was further accelerated by growing investor attention to the virtual work cause. As the entire knowledge economy turned remote almost overnight in early 2020, venture capitalists became aware of the fast scaling and growth potential of virtual solutions, especially as adoption skyrocketed during lockdowns in many parts of the world.

This investor hype resulted in over 100 VC deals in virtual work startups in 2020 alone, a 66% increase from 2019 (and again, this figure is likely even higher due to reporting lags).

Even more impressively, the investor craze led to several mega-rounds taking place in 2020, bringing the average funding amount per deal to \$17M, up from \$10M the year before.

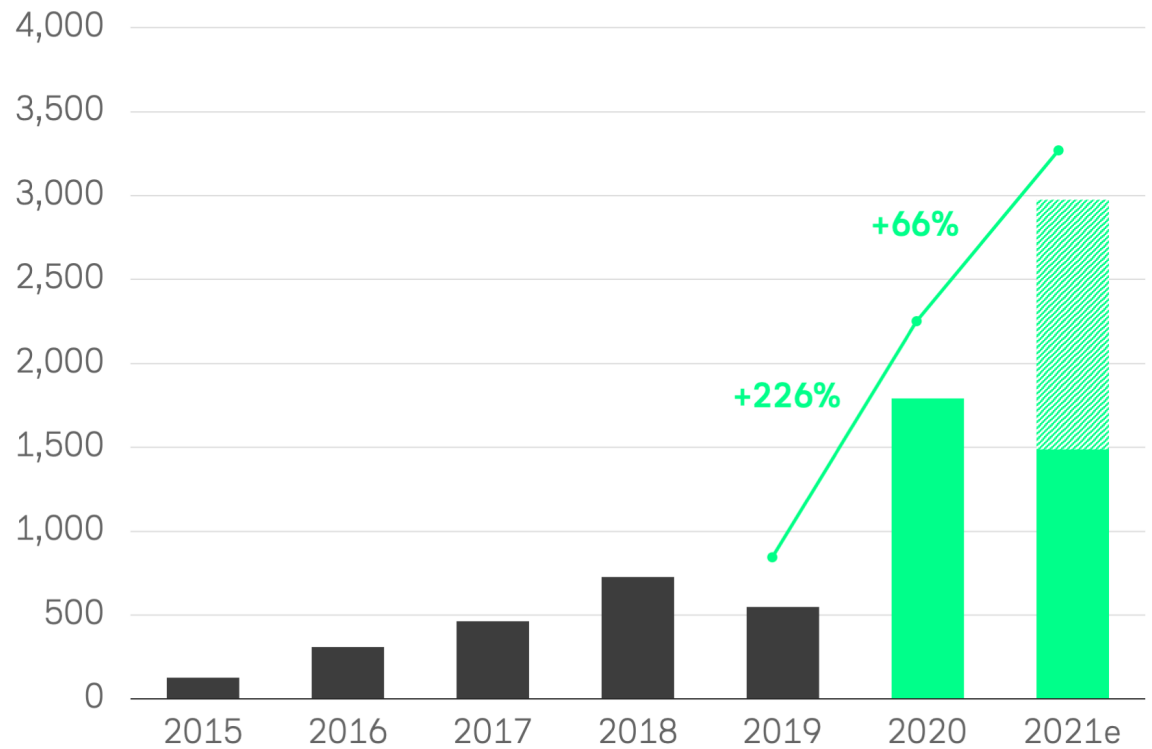
This inflow of venture capital naturally prompted even more founders to enter the virtual work ecosystem—so it's no wonder that the appetite for virtual work startups is progressing into 2021 at the same pace, if not higher, as average funding amounts have spiked to ~\$40M per deal. This indicates that the motion is likely to continue in the coming years.

## #3

TNMT

## High investment growth to be sustained by recent mega rounds

### VC funding value (\$M) in virtual work startups



Source: Lufthansa Innovation Hub, TNMT.com, Dealroom

Funding trend lines are even steeper when turning to total dollar amounts invested in respective virtual work startups instead of the number of deals. Total VC funding investments amounted to more than \$1.8B in 2020, revealing 226% growth from 2019. This astounding spike was powered by multiple mega-rounds, including from virtual events startup [Hopin](#) raising \$166M, [Bizzabo](#) raising \$138M, and virtual whiteboard startup [Mural](#) raising a total of \$118M throughout the year.

The 2021 funding trajectory looks equally impressive. Two startups have raised rounds larger than \$350M each ([Hopin](#) and [Calendly](#)), bring-

ing total VC investments to \$1.2B in Q1 alone.

The hypergrowth of these heavily-funded front-runners sets a strong tone for investors, and will further accelerate innovation in the near future.

However, it's important to note that the current funding dynamics are most likely inflated because of persisting forced lockdowns and mobility restrictions in certain parts of this world.

Although we believe that the virtual work startup ecosystem will continue to expand, the growth rate will likely slow down once workers can venture out fully without restrictions.

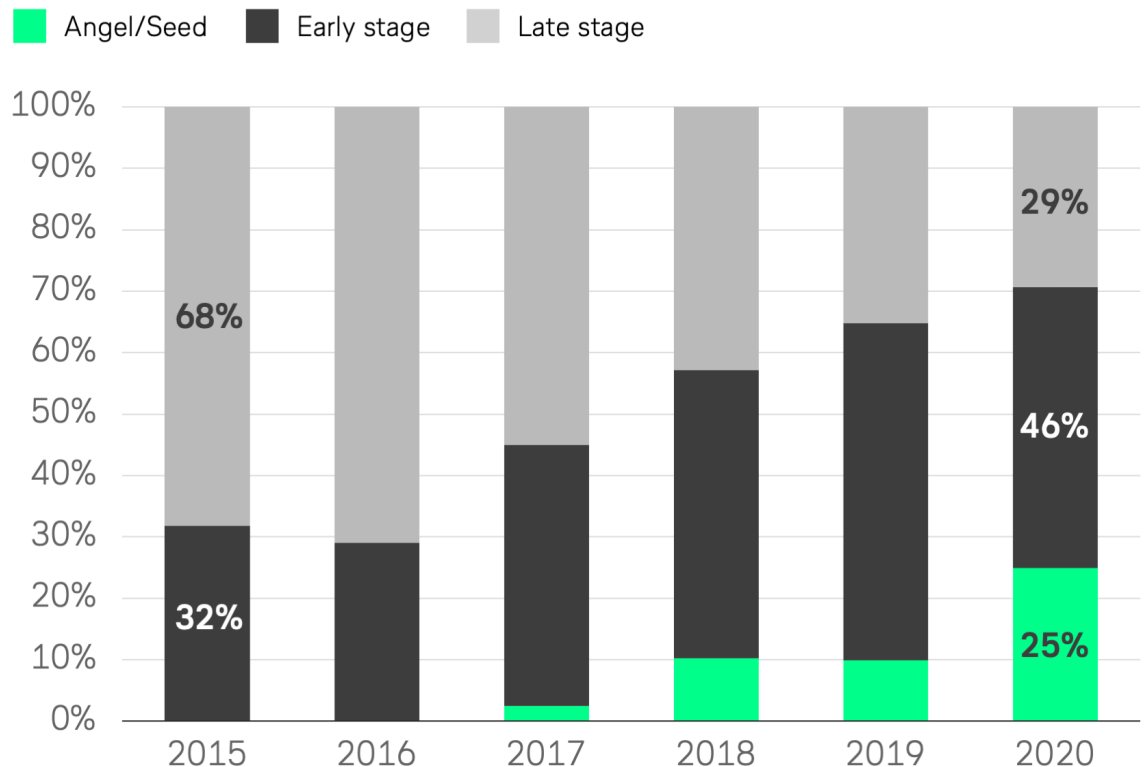


## #4

TNMT

## Virtual work is a booming sector but still in its nascent days

### Share of VC deals (#) in virtual work startups by deal stage



Source: Lufthansa Innovation Hub, TNMT.com, Dealroom

The rapid rise of upcoming virtual work startups such as Hopin reveals a market gap for new software solutions and novel technology applications that first-generation virtual work companies such as Zoom, Skype, MS Teams, and others were unable to capture.

What differentiates the new generation of virtual work ventures is that they bridge the gap between online and in-person interactions, with additional interactive functionalities ([Around](#)) that help to captivate the audience ([Klaxoon](#)), or even sense non-verbal cues ([Headroom](#)). In the context of team collaboration, startups like [Pitch](#), [Miro](#), and [Gather.town](#) offer augmented

functionalities that emulate in-person interactions, and thereby enable fluent team collaboration.

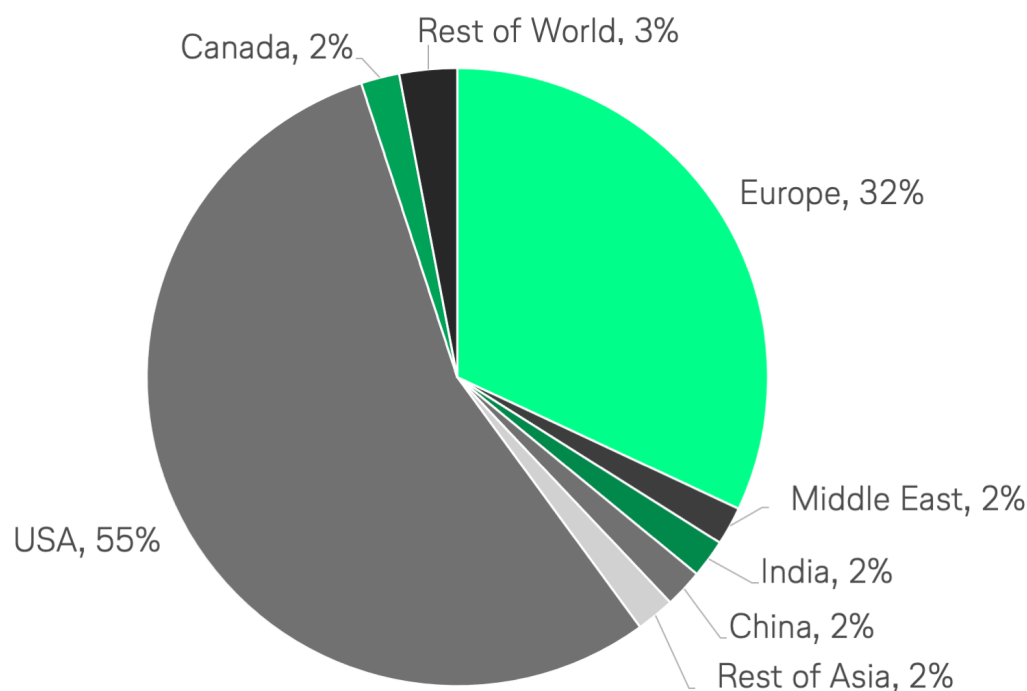
While the hybrid future of work is still being shaped, with no single market leader established at this point in time, new startups continue to enter the market and fill this gap. This is confirmed in our funding analysis, where the share of angel and seed rounds jumped to 25% in 2020—indicating that the virtual work market is still in its nascent days, with investors betting on a wide selection of tech offerings with little or no proven product-market fit.

## #5

TNMT

# The West drives the remote work shift as Asia holds back

Share of startups founded by HQ location since 2010



Source: Lufthansa Innovation Hub, TNMT.com, Dealroom

In contrast to most other startup verticals, where Asia (particularly China) is a major breeding ground for new tech startups, our data shows that the virtual work revolution is characteristic of the Western world. An overwhelming majority (about 90%) of newly-founded startups are headquartered in the U.S. and Europe, while Asia-based startups account for less than 6% of all companies.

To account for confirmation bias (although we cannot fully rule it out), we actively scouted for Asian virtual work startups and potential trends holding back the shift in the Far East. We arrived at the following assumptions:

First, Asian countries such as China, South Korea, and Vietnam have contained the virus faster than most countries in the West, thereby avoid-

ing long economic shutdowns. Due to shorter enforced home office time, Asian knowledge workers did not have the need to establish more sophisticated home office setups, and employers largely stuck to their existing software tool infrastructure.

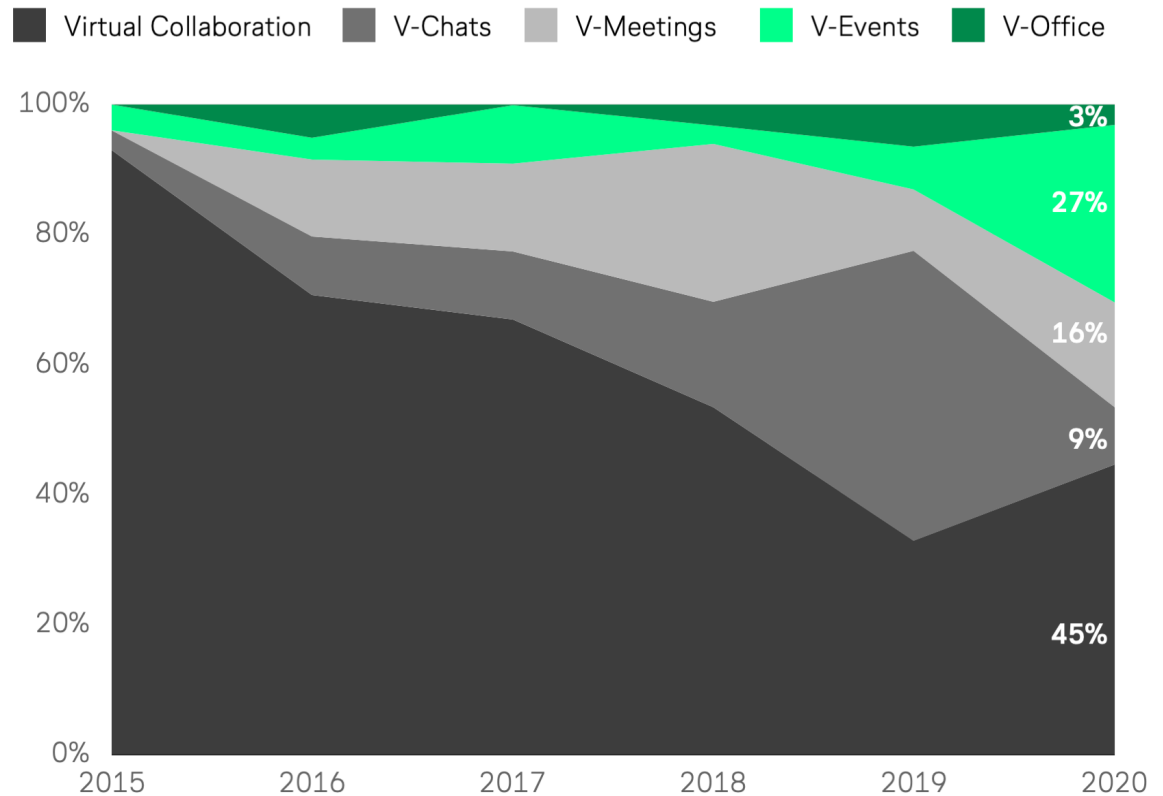
Secondly, mobile phone penetration has historically been higher in many Asian countries than in the West, with mobile (video) chat functionalities more prominently integrated into people's daily lives (think Tencent's WeChat). This also reduced the need for entirely new virtual work tools, as large parts of the population were already connected virtually. Lastly, tech giants like Tencent dominate online communication by acquiring or building companies internally, making it difficult for new startups to succeed in this space.

#6

TNMT

## Covid-19 benefited virtual event and collaboration the most

### Share of funding value (\$) in virtual work startups by category



Source: Lufthansa Innovation Hub, TNMT.com, Dealroom

Looking at the share of funding value (\$) per virtual work category, our data tells us that startups focusing on virtual collaboration—namely platforms that allow workers to create content online, collaborate via knowledge sharing, or align on workflow and objectives—comprise the first major work category to be virtualized pre-Covid, as seen by the majority of funding flowing into various collaboration startups even before 2019.

Interestingly, virtual collaboration has also proven to be the most-funded category throughout the pandemic, with close to \$1B raised in 2020. Therefore, we expect this category to remain prevalent post-pandemic, as an increasing number of distributed teams look for solutions to

synchronously collaborate online. In addition to virtual collaboration, the virtual events category gained massive traction during the pandemic, increasing its funding share from 7% to 27% in 2020. We expect virtual events startups to continuously eat away market share from in-person event participation, even after the pandemic, with hybrid event formats slated to become the new norm.

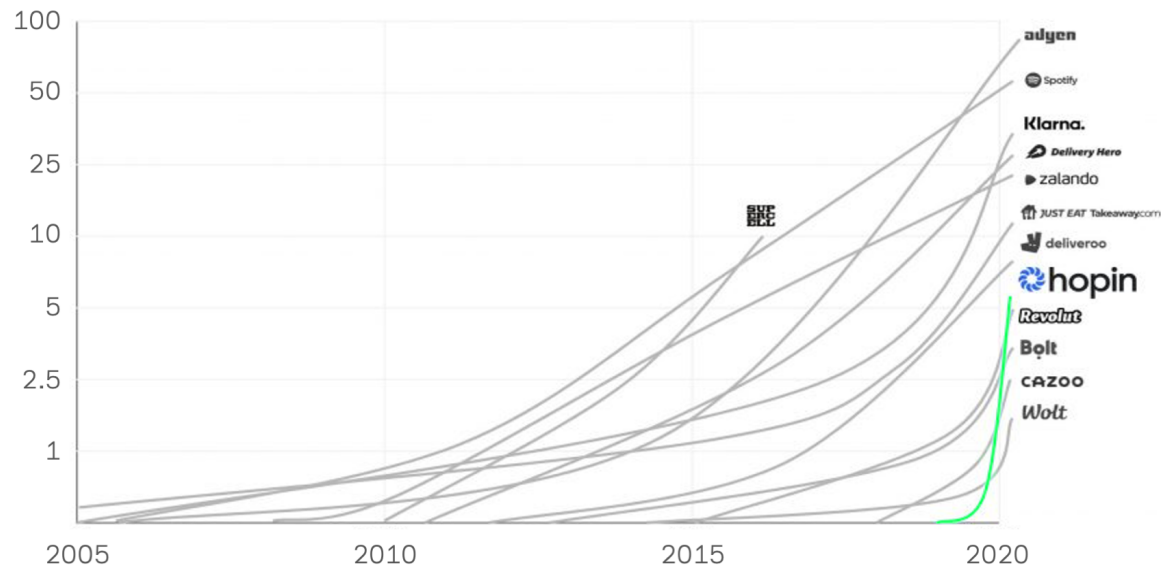
With all that being said, we project technology to continue to advance rapidly, especially where collaboration and event software are concerned. Therefore, both categories will seriously challenge the need for business travel to corporate events (and to meet with colleagues from different company locations) going forward.

#7

TNMT

# Founded in 2019, Hopin is the definition of hockey-stick growth

Enterprise value (in \$B) of fastest growing European startups over time



Source: Dealroom, Google Finance as of March 1st, 2021

The pandemic has provided unprecedented growth opportunities for a handful of startups, especially in the virtual collaboration and events space as described previously.

One of these hypergrowth players is virtual events provider Hopin, a company founded in 2019 that achieved exponential growth during the pandemic.

Visibly unaffected by scaling issues, the startup reached a valuation of \$5.65B less than two years after its founding, and grew its ARR from zero to \$70M in the past 12 months, making it the fastest-growing European startup ever as of June 1st, 2021.

Hopin is sustaining its hyper-growth via a vigorous acquisition strategy, supported by its vast capital inflow. Right after its first mega-round in November 2020, Hopin enriched its virtual events business with three acquisitions: event networking app [Topi](#), and two live streaming platforms, [StreamYard](#) and [Streamable](#). Through StreamYard alone, Hopin gained access to over 100K paying customers and 3.6M users.

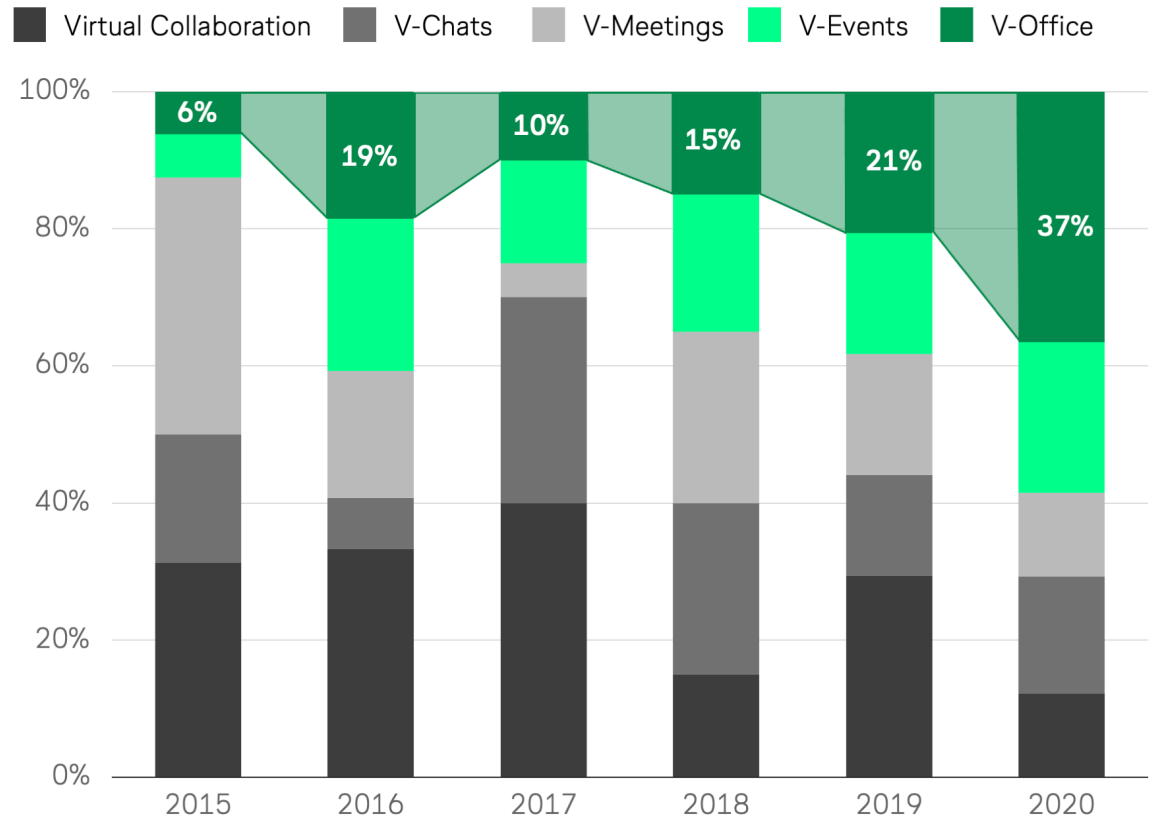
Following its second mega-round of ~\$400M, Hopin acquired voice and video collaboration platform [Jamm](#), signaling an expansion into general video communication and collaboration verticals, as the platform strives to stay relevant after the pandemic concludes.

## #8

TNMT

## Virtual office startups surge as workers miss office serendipity

### Share of newly founded virtual work startups by category



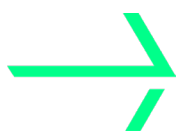
Source: Lufthansa Innovation Hub, TNMT.com, Dealroom

It is not only virtual collaboration and events startups driving forward radical change and innovation in the virtual work ecosystem. A deeper look at startup founding dynamics points to another rapidly-emerging category: namely, virtual office space.

Although not as heavily funded as collaboration and event players, the recent wave of newly-founded virtual office space ventures, representing more than 1/3 of all foundings in 2020, indicates that startup founders are seeing a lot of untapped potential in recreating physical office spaces in a virtual manner. To achieve this, startups are moving beyond simply “digitizing” routine office workflows like budgeting and time

tracking, and instead creating a fully-augmented, immersive, and interactive virtual experience of being “at work.” Highly-promising companies include [Teamflow](#) (with \$15M in funding) and [Spatial](#) (with \$22M in funding), which deliver a seamless VR experience. Companies like [Gather.town](#)—currently the most-funded virtual office startup with \$26.5M secured—offer a virtual office environment that resembles some sort of Pokemon game world.

We expect a lot of this startup traction to be based on the fact that many workers eventually started to miss the social life of a physical office during the pandemic, and that they decided they no longer wanted to miss out on this.

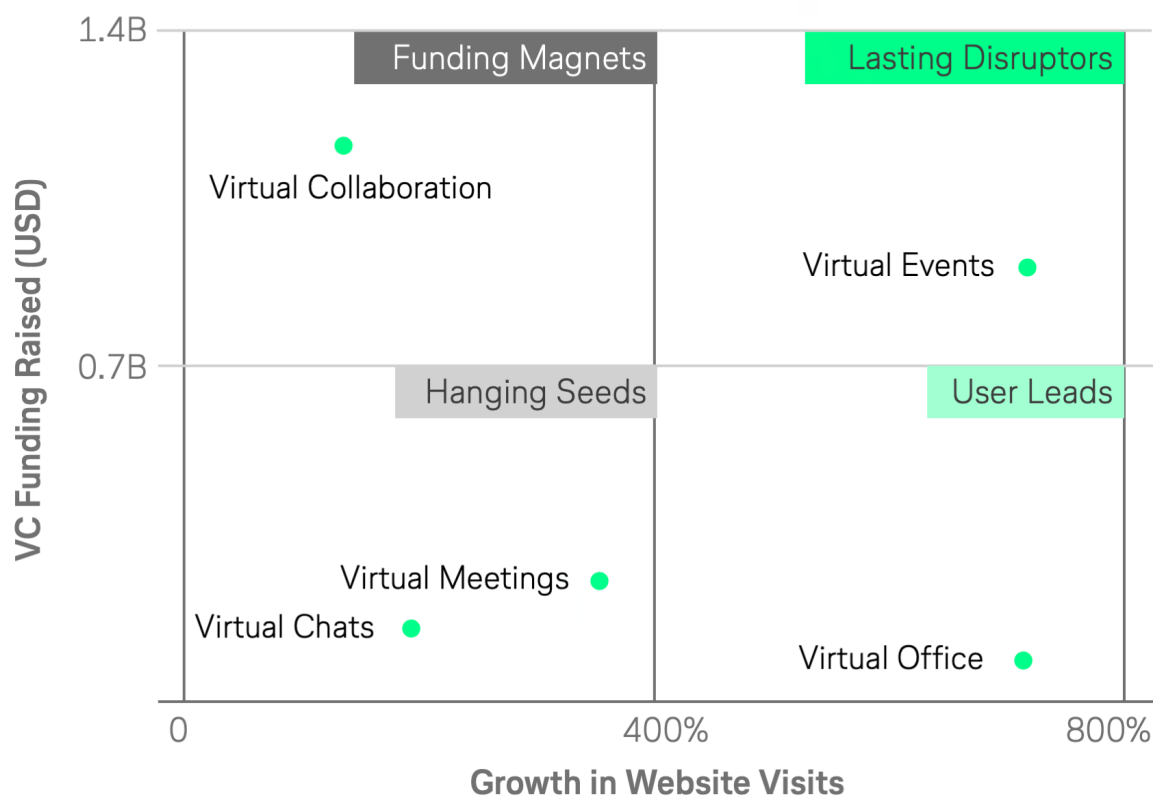


# Conclusion

TNMT

## Virtual office solutions are yet to see major investor interest

### The Virtual Tool Growth Matrix



Source: Lufthansa Innovation Hub Analysis, TNMT.com, Dealroom, SimilarWeb

After analyzing various forms of funding dynamics across the virtual work startup ecosystem, the ultimate question remains: What is here to stay post-Covid?

To better judge the long-term impact of the virtual work revolution on office routines and the resulting corporate travel activity, we developed a more comprehensive framework coined the Virtual Tool Growth Matrix.

The Virtual Tool Growth Matrix combines investor interest (gauged by VC funding) and user interest (represented by cumulative growth in website traffic) during the pandemic for the five defined virtual work categories we looked at earlier. It provides a quantitative evaluation of the post-Covid longevity of various virtual work activities, thereby indicating which business travel motives are most likely to return.

In other words, the four quadrants of the matrix classify the extent of business travel substitution, offering founders and investors an evidence-based view of the most attractive virtual work segments going forward.

This understanding is also highly relevant for travel providers like airlines, allowing them to better prepare for a post-Covid future by evaluating which software and travel motives can be used as a new complementary service to business travel.

Looking at the bigger picture, the matrix tells us that the long-term adoption of virtual tools—and their impact on business travel—will vary significantly based on the interaction.

Additionally, the matrix shows that there are clear winners and some very likely trends ahead. Namely, virtual event startups have captured both user and investor attention, and in the coming months, we can expect these platforms to keep expanding, cementing their utility for knowledge workers and remote teams across the globe.

The matrix also reveals a discrepancy between user interest and investor focus on different virtual tool categories. Specifically, it seems as though most investors are predicting a return to in-person meetings—while users are more open to long-term remote and hybrid work solutions, including virtual alternatives to traditional office solutions.

Ultimately, the matrix reveals that users will more than likely give up office huddling and watercooler chatter for the comfort of home, and for the flexibility of permanent remote work. Only time will tell, of course—and we plan on paying close attention to how things progress.

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# Newsletter

## TNMT

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