

12-10-2021

TRIPBAM: Creating Digital Value during the COVID-19 Pandemic

Gabriele Piccoli

Louisiana State University, USA & University of Pavia, Italy

Federico Pigni

Management Technology & Strategy Grenoble Ecole de Management F-38000 Grenoble, France

Barbara Wixom

Massachusetts Institute of Technology, USA

Joaquin Rodriguez

Management Technology & Strategy Grenoble Ecole de Management F-38000 Grenoble, France

Follow this and additional works at: <https://aisel.aisnet.org/cais>

Recommended Citation

Piccoli, G., Pigni, F., Wixom, B., & Rodriguez, J. (2021). TRIPBAM: Creating Digital Value during the COVID-19 Pandemic. *Communications of the Association for Information Systems*, 49, pp-pp. <https://doi.org/10.17705/1CAIS.04933>

This material is brought to you by the AIS Journals at AIS Electronic Library (AISeL). It has been accepted for inclusion in *Communications of the Association for Information Systems* by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.



TRIPBAM: Creating Digital Value during the COVID-19 Pandemic

Gabriele Piccoli

E. J. Ourso College of Business
Louisiana State University, USA
& University of Pavia, Italy

Barbara Wixom

Center for Information Systems Research
Massachusetts Institute of Technology, USA

Federico Pigni

Management Technology & Strategy
Grenoble Ecole de Management
F-38000 Grenoble, France

Joaquin Rodriguez

Management Technology & Strategy
Grenoble Ecole de Management
F-38000 Grenoble, France

Abstract:

TRIPBAM pioneered automated clustered rate monitoring in the hotel industry. As the technology startup prepared for a successful exit that would reward founders, employees, and investors for their success, the coronavirus disease of 2019 (COVID-19) pandemic hit. The case chronicles TRIPBAM's leadership's fast reaction and discusses the strategic initiatives the firm put in place to set itself up for a return to growth after the crisis.

Keywords: Teaching Case, COVID-19, Value Creation, Value Capture, Digital Resources.

This manuscript underwent editorial review. It was received 6/11/2020 and was with the authors for eight months for one revision. Heikki Topi served as Associate Editor.

1 Introduction

TRIPBAM, which Steve Reynolds founded in late October, 2012, had grown into the leading hotel rates shopping and compliance engine for travel managers in the United States¹. The original intuition behind TRIPBAM came from Steve Reynolds' observation that, in most cases, one could find refundable rates twice during a booking that beat the best prices that online travel agents (OTAs) could propose when approaching the day on which a booking began.

At its core, TRIPBAM was an automated cloud-based service that enabled customers to monitor rate changes and re-book hotel reservations prior to travelling. While customers booked between one week and two months in advance on average, prices may have dropped once or twice (Gasdia, Liu, & Blutstein, 2015), which resulted in savings for customers. In the simplest use case, on TRIPBAM, customers could create specifications for a reservation they already held: the arrival and departure date, room type, discounts the customer qualified for (e.g., American Automobile Association), the rate booked, and, of course, the hotel name and location. TRIPBAM referred to these specifications as the "search". Once customers confirmed the search, TRIPBAM monitored the hotel for rate fluctuations and alert the customer when rebooking would yield savings (Figure 1).

TRIPBAM also offered a more advanced service that monitored rates in a defined hotel cluster (i.e., a group of hotels that travelers deemed comparable to the one they had originally booked and would stay at for their planned trip). Customers could form the cluster by dragging hotels in a geographical radius into a list. For customers who created clusters in unfamiliar locations, TRIPBAM produced customized suggestions based on inclusion criteria such as distance, brand, and amenities.

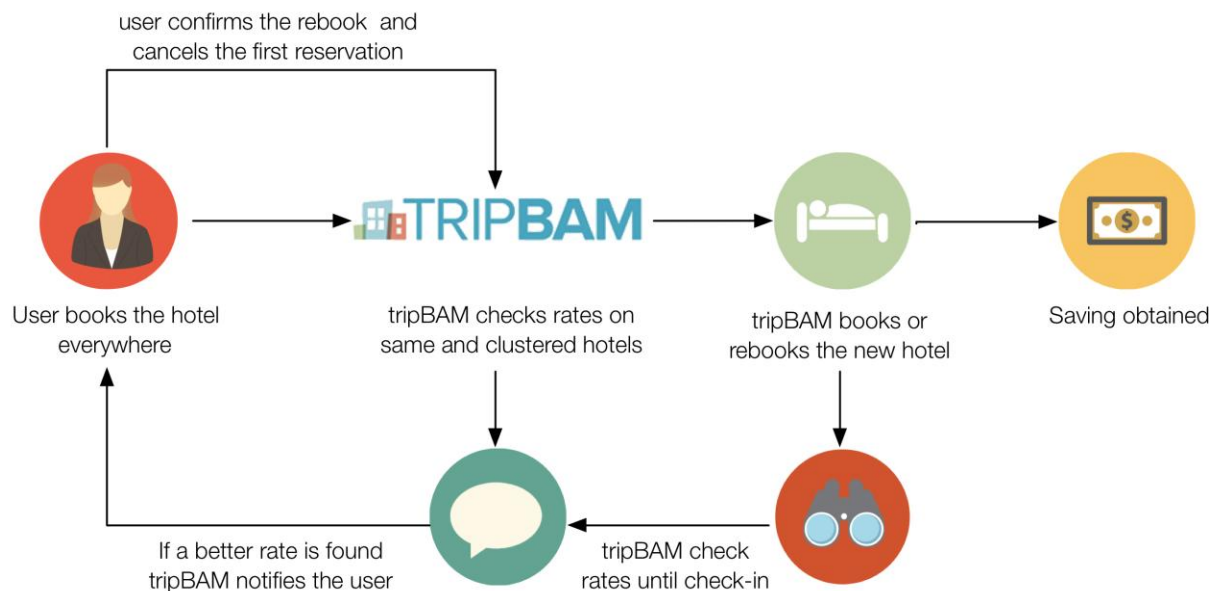


Figure 1. TRIPBAM Overall Clustered Rate Shopping Process

While initially Reynolds believed that TRIPBAM could flourish in the consumer space, corporate customers started to show their interest based on the potential savings they could achieve. The business-to-business (B2B) market the company could address was huge as, on average, a corporate customer could easily manage over 15,000 bookings per year. In particular, compliance was a critical element in the corporate space. Each company had specific requirements on their preferred property program, negotiated rates, preferred brands, and agreements with hotel brands. While most corporations had automated policy compliance tools, most companies still manually monitored and controlled travel expenses.

¹ We designed this case to be used in conjunction with the first case titled "TRIPBAM: Leveraging Digital Data Streams to Unleash Savings". Readers can find much of the background information on the travel industry, the underlying technology and systems, and the history of TRIPBAM in that paper (Piccoli & Pigni, 2016).

By 2018, TRIPBAM had clearly consolidated its position as the leader in hotel rate shopping for travel managers in the corporate space. The firm had evolved from a solution that offered little more than clustered rate shopping into a full-fledged hotel-reservation and compliance-management system. TRIPBAM undoubtedly created value for its large corporate customers that needed to monitor and enforce their travel policies. Compliance and the perspective savings that TRIPBAM unleashed had fueled the firm's growth. However, OTAs remained reluctant to use TRIPBAM or propose similar features themselves as they worried about the impact it could have on their bottom line. Who could ever want to offer customers a service that results in lower revenues? However, leading travel agencies and management firms saw the opportunity to provide their customers with additional valuable services. What could go wrong?

2 COVID-19: The Unexpected Guest

In early 2020, TRIPBAM had found its stride: it had hit record customer, transaction, and revenue numbers in a robust business travel market (see Figure 2). The firm had achieved metrics that made it a desirable acquisition target. Then, as the United States went into progressive lockdown due to the coronavirus disease of 2019 (COVID-19) pandemic, travel stopped, and, with it, hotel reservations ground to a virtual halt (see Figure 3).

With everyone stuck at home, TRIPBAM leaders appreciated that, as a software company, it could continue work remotely after the initial shock and, with the right moves, even emerge in a better competitive position. TRIPBAM ran a lean shop: it employed just over 30 people. With an annual run rate exceeding US\$10 million², the firm monitored almost US\$10 billion in annual travel spend for customers. As the pandemic hit the travel industry, Reynolds recalibrated staff and rallied employees to focus efforts on optimally positioning the firm for the inevitable recession. As the old adage goes, it was no time to waste a good crisis. Reynolds explained:

This crisis is helping us take step back and say: hey, this initiative we've been trying has not really worked out. In a normal environment you just let it chug along, but now we are making some hard choices. Pulling the plug on some underperforming initiatives and making some bold moves.

Reynolds described an example that could benefit the firm while helping the industry:

We are creating a referral network, and we are supporting laid off and furloughed travel industry executives to promote our product. For example, if one of their contacts watches a sales presentation, we will pay for the referral. The executives can supplement their income in these hard times, and we reach new potential customers.

Other initiatives included partnering with consultants who typically support negotiations between corporations and suppliers. Since the company had put all deals on hold, consultants had the time to become certified TRIPBAM administrators. After certification, they realized earnings by helping TRIPBAM's clients action the savings opportunities that the system found. Having become expert TRIPBAM product users, industry consultants could then evangelize it with their own clients and become account executives for any new client they procured.

However, the time and incentive to think creatively beyond the transactional model that had historically driven the firm's growth represented perhaps the greatest "gift" that the crisis afforded the company. One such new initiative was the hotel closures report. Due to its visibility into hotel rates' availability, TRIPBAM could determine whether a hotel was operating or not. The firm published the weekly report for free to provide valuable information to the industry and policy makers dealing with the crisis. This report simply demonstrated the value that one could extract from the multiple digital data streams that the company captured. What other opportunities existed for monetizing TRIPBAM's data? How could the firm take advantage of new opportunities without losing focus of its main product?

² TRIPBAM data calculated based on 2019's annual data.

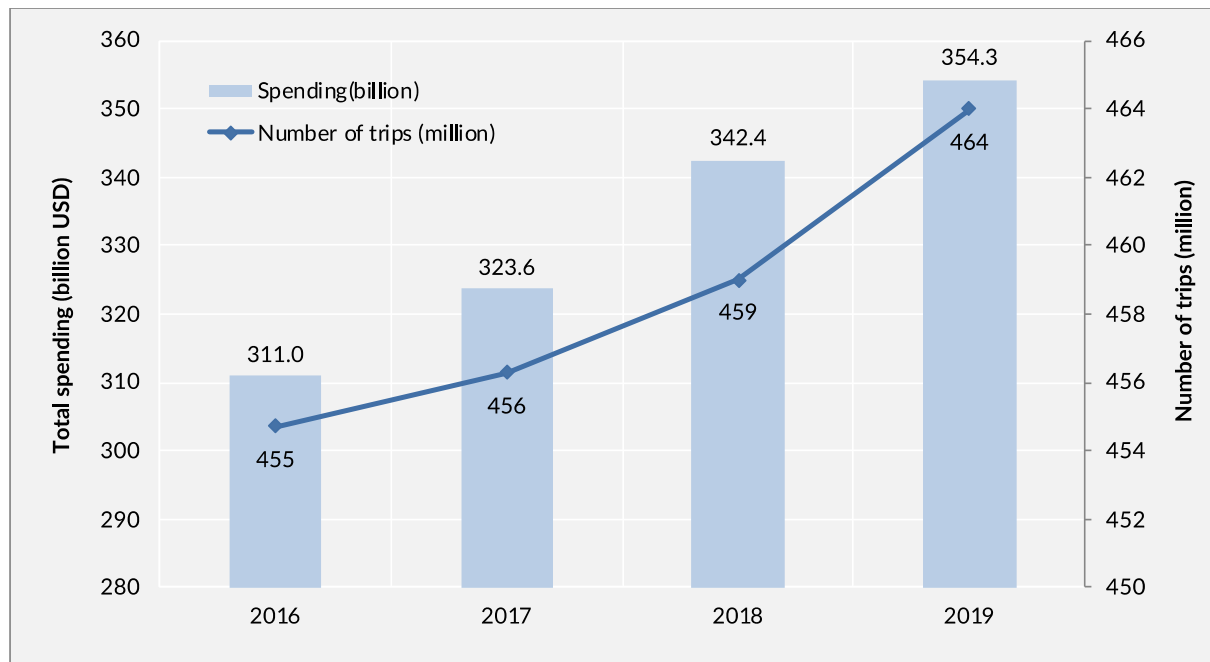


Figure 2. U.S. Domestic Business Trips and Spending (World Travel & Tourism Council, 2019; U.S. Travel Association, 2019)³

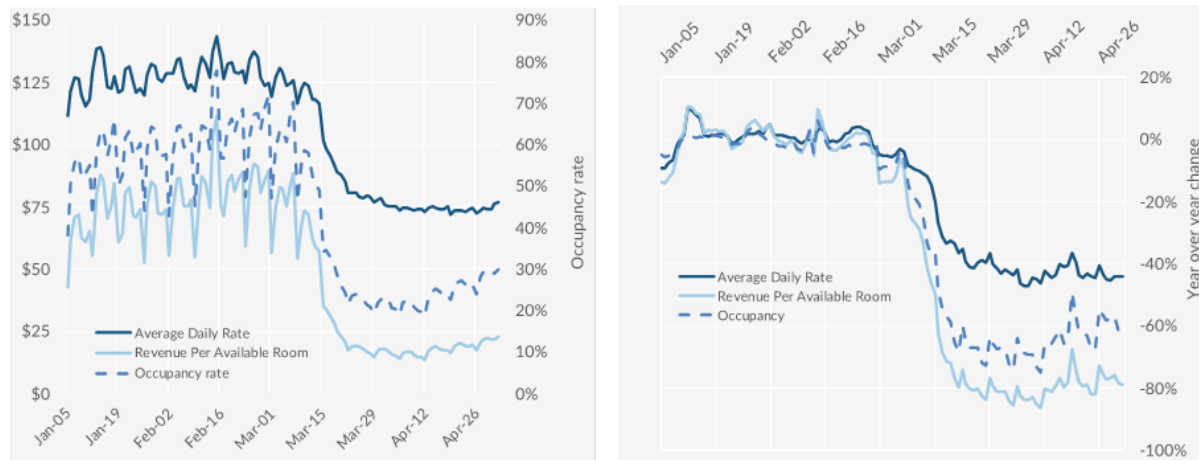


Figure 3. Average Daily Rate (ADR), Revenue per Available Room (RevPAR), and Occupancy Rate in the US and Year Over Year Change (STR, n.d.)

³ Person-trip is defined as one person on a trip away from home overnight in paid accommodations or on a day or overnight trip to places 50 miles or more (one-way) away from home.

3 Growing TRIPBAM

While originally conceived as B2C service, TRIPBAM quickly focused on B2B space. Since signing up its first mega agency, BCD Travel, in 2013, the firm had inked deals with 12 of the largest travel agencies⁴ worldwide and integrated with 19 out of the 20 largest travel management companies (TMC)⁵ (see Figure 4). After signing its first corporate client in late 2014, TRIPBAM had grown to over 2,000 corporations under contract with about half of the Fortune 100 and a sizable proportion of the Fortune 500 as direct customers. John Berkley, TRIPBAM’s head of business development, explained how the firm viewed the market opportunity:

Large buyers have more than \$10+M in yearly hotel spend. There may be 5-700 of those in the US. The mid-tier spends \$5-10M and there are probably 1,000 of those. Then you have a very varied landscape with many viable candidates, as long as they actively manage travel and direct travelers to booking channels we can monitor.

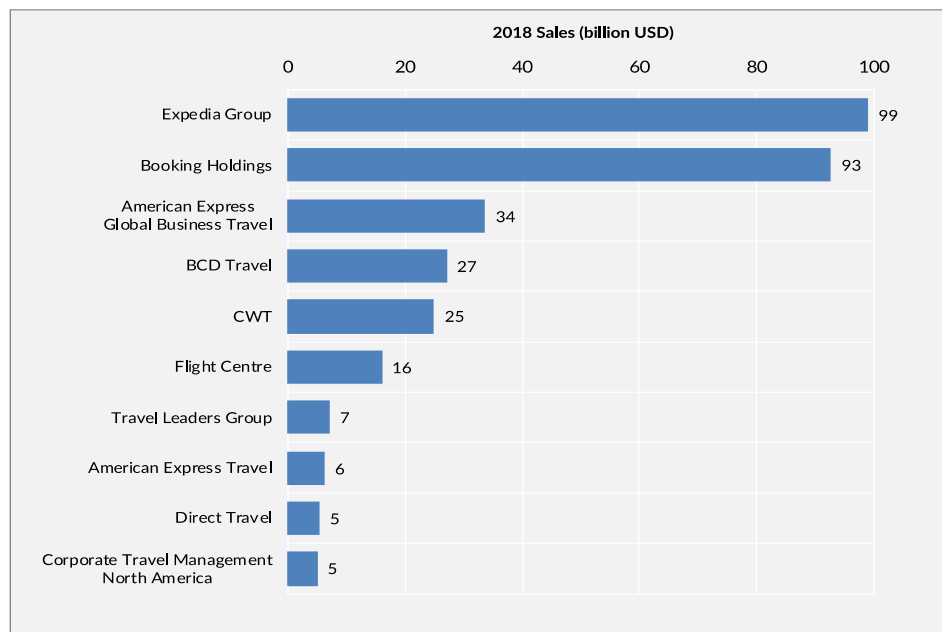


Figure 4. Ranking of the Largest Travel Companies Worldwide by Sales (Travel Weekly, 2019)

TRIPBAM achieved a major milestone in October, 2019: it had processed 20 million reservations and, in the months preceding the non-essential travel lockdown in the US, monitored almost four 400,000 daily shops. The “daily shops” metric referred to reservations that TRIPBAM’s system monitored on any given day.

Beyond rate shopping, TRIPBAM’s value proposition included compliance, and the firm had continued to grow its service portfolio. Major reports and aids to travel buyers now included negotiated rate auditing, daily rate assurance, sourcing solutions, automatic alerting to hotels out of compliance (see Table 1).

⁴ Mega agencies were categorized as the top earning global travel agencies, including powerhouses such as American Express and BCD Travel—companies with tens of billions in sales and thousands of employees.

⁵ A TMC, also known as a business travel agency or corporate travel provider, is a travel agent that fully manages the business travel requirements that an individual, company, or organization delegates. Compared to retail travel agencies, the TMC offered services such as rebooking when travel was disrupted or plans changed, keeping control of a travel policy, and allowing the client to spend less time on time-consuming travel arrangements.

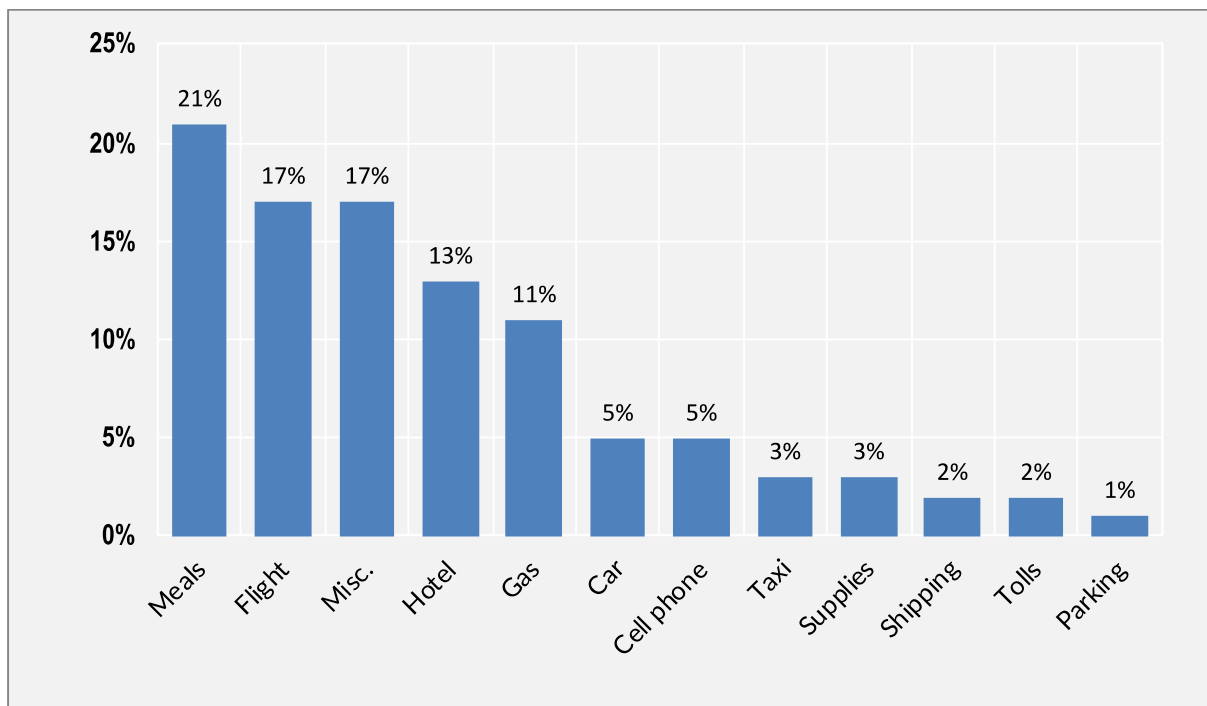
Table 1. Partial List of TRIPBAM Offerings

1	Monitoring room rate fluctuations
2	Clustered rate monitoring and shopping on preferred properties
3	Amenities adjustments
4	Automatic and Assisted rebooking
5	Monitoring and reporting of last room availability
6	Monitoring and reporting of lowest qualified rate
7	Comparison of last room availability and lowest qualified rate
8	Corporate program evaluation
9	Identification of negotiated rate opportunities

4 The Business Model

Since its inception, TRIPBAM's most obvious value proposition involved helping customers uncover travel savings by shopping hotel rates after they made a reservation. Lodging constituted a sizable portion of corporate travel budgets (see Figure 5). By keeping tab on constantly changing prices at the booked hotel and a cluster of comparable hotels nearby, TRIPBAM could produce substantial savings for their corporate customers. Reynolds explained:

We try to get 2-3% in overall saving on total travel spend for our customers, at least. Right now, with the rate volatility in the market that number is way up to 5-6% and even 10% in some cases.

**Figure 5. Average Business Travel Spending (Certify, 2019)**

Large customers acquired the service by paying a monthly subscription fee that ranged from the low thousands to more than US\$60,000 dollars depending on the average number of reservations. By monitoring savings in relation to monthly subscription costs, TRIPBAM's leadership could compute a clear ROI for each client and could ensure the service delivered appropriate value. As a testament to the value that TRIPBAM created with its shopping engine, it had virtually no customer churn. As Reynolds put it: "We make sure each customer has at least a 4x ROI, so why would they churn?". Berkley added:

When you get to the large corporations, the economics and financials are so crystal clear, it's hard not to buy TRIPBAM. Even if you set it up at the most conservative level, with no traveler friction or employee resistance, you already save 1% on pure rate arbitrage—and then it grows from there.

Some smaller clients, unable to reliably predict how many monitored reservations they would need, opted for a gainsharing model. The gainsharing model entitled TRIPBAM to receive 25 percent of the realized savings for any reservation that TRIPBAM rebooked on the client's behalf. Those customers had the option to flip over to a subscription model if volumes did grow to meet thresholds that made the conversion advantageous.

Finally, TRIPBAM had cleverly devised a way to move the gainsharing from the corporate level to the individual traveler's budget. After finding a lower rate, when a traveler rebooked the reservation, TRIPBAM would refund the original rate on traveler's credit card, charge the new lower rate, and debit the gainsharing fee. This approach helped to attract customers in the few cases where a client's corporate travel office did not have the budget to purchase the TRIPBAM solution. Because it shifted service costs to the travel budget of the ultimate beneficiary (i.e., corporate travelers' own departments), TRIPBAM enabled corporate travel offices to obtain its service and overcome resource constraints.

TRIPBAM mostly designed the subscription and the gainsharing models for larger corporations, and they accounted for about 50 percent of its revenue. The remaining 50 percent came from bookings associated with smaller corporations through travel agencies. TRIPBAM had tried to crack a difficult problem: how to move down market and reach smaller corporations with limited travel spend. Reynolds explained the challenge:

It's hard to figure out a solution that has seamless onboarding, whereby a customer can self-provision our service similar to a SaaS⁶ model. Go to the website, click a few buttons and start saving. To capture their bookings, you still need to involve a TMC.

Having to involve the travel agencies required TRIPBAM to be able to provide appropriate incentives. The firm settled on a reseller model because it provided a win-win for all involved. The TMC would onboard its own clients into the service using TRIPBAM's enterprise product, which allowed the travel agents to easily configure accounts using standard features. The TMC performed the sales, onboarding, and account management activities since its customers could pay them for the service and the TMC could share with them the savings that TRIPBAM uncovered. In turn, the TMC paid TRIPBAM a small percentage of how much they saved. In this model, every client had a standard configuration that made it easy for travel agents to onboard and manage the account while forgoing some ad hoc features that large corporations typically needed (e.g., international versions, VIP traveler exceptions). Berkley explained:

The regional TMCs that are being successful are moving to a consultative model and bundling TRIPBAM with their other services. By doing so, they can charge a monthly fee for service to their corporate clients.

In addition, TRIPBAM provided more subtle (but no less important) value via the insights it could uncover for travel buyers. Such insights included helping employees comply with their firm's travel policies and helping suppliers comply with complex preferred hotel agreements. Corporate clients negotiated such agreements through a request for proposal (RFP) process. Berkley explained:

The RFP process is a very laborious manual process that does not take advantage of any digital data stream. Large corporations hire their TMC or consultants to analyze a year's worth of data in Excel, then they have a back and forth with sometimes hundreds of hotels. And of course, the hotel uses different data so there is no single source of truth to guide the discussion.

While TRIPBAM sometimes had a contentious relationship with suppliers given its strict allegiance to buyers, it could play an important intermediary role in negotiations. Reynolds explained:

Chains are trying to convince corporate travel buyers to move to a dynamic discount—a percentage off the best available rate⁷—rather than a fixed corporate rate. That benefits

⁶ Software as a service (SaaS) is a software delivery approach in which a provider hosts the application in its data centers and customers access the needed functionalities over a computer network. Gmail and Dropbox exemplify SaaS in the consumer space.

everyone because it takes into account seasonality for hotels and it can reduce cost for travel managers.

Blanton added:

Dynamic deals are ideal, but you need auditing and rate limits. We offer ongoing monitoring of BAR, lowest qualified rate (LQR)⁸ and the actual discounts being provided. This gives full visibility and auditing to corporate buyers. We are the only ones who do it like this. When this auditing is coupled with automated sourcing, rate caps and rate targets by market, you no longer need annual RFPs. You renegotiate when needed, and our automation handles the rest. We call this the “TRIPBAM way”, and we feel like while the world has essentially pushed pause on travel, now is the perfect time to disrupt this unreasonably cumbersome, legacy RFP process and bring a superior hotel procurement process to our clients.

Dynamic discounts held great appeal for both buyers and suppliers who could benefit financially, and they dramatically simplified the contractual process. However, travel buyers found it much more difficult to evaluate a discounted dynamic rate than a fixed corporate rate. In other words, how could a corporate travel manager who had negotiated a 20 percent discount off the best available rate (BAR) be sure that the discount applied to the BAR and not some higher rate? Having harvested and cleansed reservation data and shopping results, TRIPBAM could compute a staggering array of daily, weekly, and monthly metrics (see Table 2). It made these metrics available its customers and their account executives. Further, TRIPBAM could audit transactions to ensure that it applied discounts correctly. As Blanton put it:

You learn a lot when you dig deep and you know what you are looking for. We are able to grade hotels based on their compliance with the specifics of their contract with our clients – are they providing last room availability as negotiated? Are the rates good compared to the market? Are they rate squatting? We can even identify hotel squatters⁹.

Table 2. Primary Hotel-level Metrics

Metrics	Description
Total bookings	Total number of bookings monitored for a hotel
Potential savings	Total number of bookings for which TRIPBAM uncovered a lower rate
Realized savings	Total number of bookings for which clients accepted the lower rate that TRIPBAM uncovered
Percentage of realized savings captured	Percentage of total bookings for which clients accepted a lower rate that TRIPBAM uncovered
Overall net savings	Total savings divided by total travel spend
Last room availability (LRA) ¹⁰	Percentage of time that a hotel correctly applied a negotiated discount

Once TRIPBAM established reliable auditing, buyers and suppliers could do away with the yearly RFP process, negotiate a recurring discount, and let TRIPBAM monitor the contract application’s accuracy and fairness. While the entire industry faced negative effects from the pandemic, TRIPBAM offered real savings, efficiencies, and a new form of smart sourcing that could change the industry permanently. TRIPBAM’s survival was clearly not at stake.

⁷ Best available rate represents a pricing mechanism based on the lowest available rate for a room that does not require pre-payment and does not impose particular change or cancellation charges. In this sense, the price may vary and differ each day one stays in a room.

⁸ Lowest qualified rate (LQR) is the lowest rate for an identical room at an identical hotel.

⁹ Hotel squatting occurred when a hotel that did not have or no longer had a negotiated rate with a corporation would publish rates that signal otherwise in the rate descriptions.

¹⁰ LRA measures then the number of times the hotel correctly applied the negotiated fee. With negotiated rates, customers have the right to book even the last room—typically pricing higher—at the negotiated rate. However, in situations with high occupancy and corresponding high room rates, hotels have less incentive to apply a discount.

5 Competition

TRIPBAM's competition constantly evolved. In the early days when the firm entered the consumer space, several startups had similar models: Tingo, TripRebel, Waylo, Dreamcheaper, Rebookee, RoomsNinja, and Pruvo. Customer demand never truly materialized. Tingo, a TripAdvisor company, ended its operations in 2019. Ashton Travel acquired TripRebel's brand and website but discontinued the shopping service. Waylo tried to differentiate itself by replicating the formula that Hopper used for airline fares. By analyzing the daily prices, Waylo focused on forecasting a price drop and allowed users to rebook at the predicted lower rate. RoomsNinja and Rebookee never seemed to go past the seed investment funding. Pruvo, an Israel startup, targeted the B2B space and successfully secured a US\$1.1M seed funding round as the pandemic broke out. It remained unclear how resilient the company would be through the crisis (Lerner, 2020).

Yapta, an early entrant in the corporate travel market, remained TRIPBAM's only main competitor. However, in January, 2020, Coupa Software, a business spend management platform similar to Concur, purchased the firm:

Coupa Software has acquired business travel price assurance technology Yapta, adding it to the company's travel and expense management technology portfolio. Yapta will now be marketed as Coupa TravelSaver for Airlines and Hotels, respectively, according to James Filsinger, who served as president and CEO of Yapta prior to the acquisition. (Perrotta, 2020)

Before the acquisition, Yapta had a portfolio that comprised 30 TMC partners that distributed or used Yapta products and technology, which resulted in 8,500 corporate clients and half of the Fortune 100, which included Amazon, the National Basketball Association, and Shell Oil (Perrotta, 2020). However, these customers appeared to primarily use Yapta's airfare shopping service, and TRIPBAM rarely found itself in direct competition. Due to the acquisition, Reynolds expected that Yapta would no longer serve agencies or corporations that did not use Coupa Software for travel management. Reflecting on competition Reynolds concluded:

I don't feel like there is anyone doing what we do for the transient corporate travel market. Most travel agencies who want to offer a service like ours try on their own, they lose patience after a year or two and then they sign on with us when their large customers demand it.

TRIPBAM had set itself up to exit the crisis stronger and more differentiated. It had begun several efforts focused on increasing transactions and also going down market—something that had proven difficult for it before.

6 Digital Infrastructure to Fuel Hypergrowth

As a technology company, TRIPBAM's core strength lay in its proprietary software. Caleb Blanton, who originally created TRIPBAM's proof of concept, headed the IT group. With the basic business model and technology proven, TRIPBAM leaders focused on growth. With the number of transactions rising steadily, it became clear that moving to the public cloud would be advantageous. Blanton explained:

It was fortuitous timing for us, but we had planned to migrate to the cloud before the crisis hit. We decided to migrate to achieve hyperscale agility. We use Microsoft Azure and it allows us to quickly scale up (or down) and scale out. You also get security out of the box and a lot of DevOps tools and support.

The cloud infrastructure enabled cost control and flexibility, which came in handy during the crisis when corporate travel dropped by an unprecedented percentage. TRIPBAM pursued two major technology development growth vectors: rate shopping and insight actioning for customers. Data capture could occur via direct connections to the TMC's own system, but, for the bulk of reservations TRIPBAM harvested bookings from the global distribution system (GDS) (see Figure 6)¹¹. Blanton explained:

¹¹ The GDS represented the backbone of the travel industry. Hotels published room availabilities and rates in these systems to make them visible to travel agents.

Most of our data capture is done on the global distribution systems. A travel agent needs to have its customers sign a data release authorization¹², and we have a solution that has been vetted and it works reliably to capture the reservations.

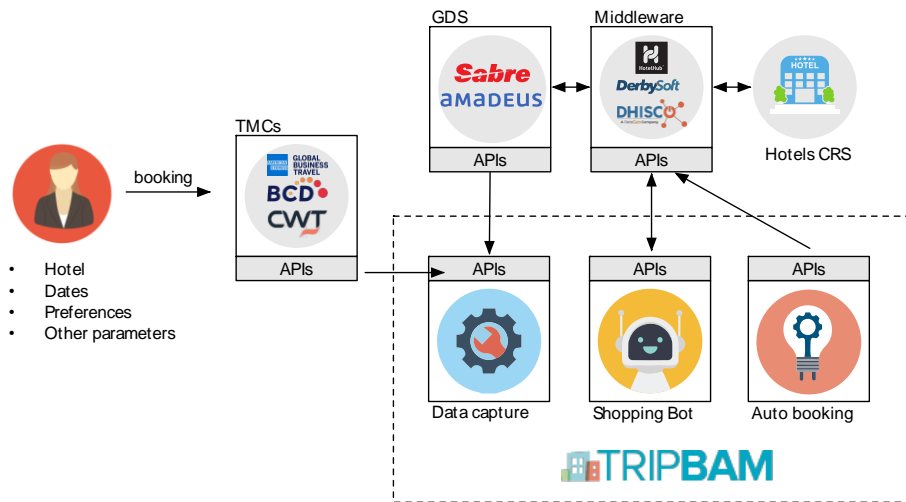


Figure 6. Simplified Ecosystem Diagram

However, capturing reservations reliably and accurately was no simple feat. A typical reservation contained structured data (e.g., check-in and check-out date), but most of the required information was in free form text fields. Blanton explained the associated challenges:

Booking systems, like the GDS, were designed to be used by humans. Room types, available amenities, the specifics of cancellation policies, often even the nightly rate being charged is stored in blobs of text. But you have to extract it precisely and reliably to make sure you shop a comparable product.

Constantly on the lookout to improve its data sources' scope and range, TRIPBAM had begun talks to create direct data-capture interfaces with the major lodging chains. As hotels incentivized corporations to book directly and bypass costly intermediaries, the travel buyers had leverage to require the suppliers to share direct reservations with TRIPBAM. Reynolds remarked:

We are discussing a direct interface with several chain central reservation systems. It is mostly valuable for the corporation, but it can also help the chain lower its cost structure and improve its brand control.

¹² A data release authorization (DRA) is a contract provision that allows a travel agent to receive, process, and/or transfer personal travel data from a client's travelers.

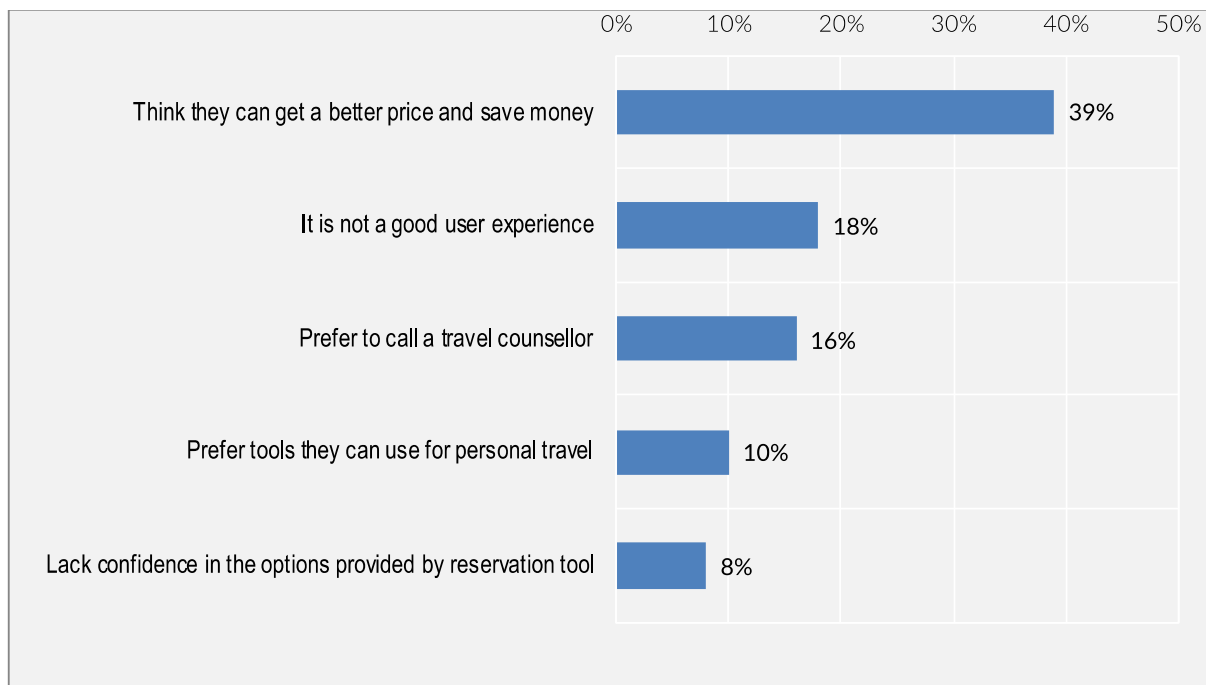


Figure 7. Reasons for Noncompliance (ACTE Research, 2019)

The value of TRIPBAM services grew proportionally with the proportion of client's travel expenses that it handled. In other words, the type of insight a corporate travel manager could glean from TRIPBAM reports and the type of actions they could implement once armed with the insight (e.g., new sourcing deals) depended on having TRIPBAM track a sizeable proportion of the bookings. Blanton framed the challenge as follows: "The main issue is travelers following hotel reward points, but sometimes travelers can find better deals online". Many corporations could not or would not force employees to adhere to travel policies and use the corporate booking systems exclusively. As a consequence, corporate travelers sometimes booked preferred hotels¹³ directly or even reserved rooms at non-preferred hotels. In many cases, simple convenience spurred travelers to book out of channel (see Figure 7)¹⁴. However, such behavior created a major challenge for TRIPBAM. Blanton explained:

It's a big challenge to identify out of channel reservations where travelers go to Hyatt.com and book their own reservation because they want frequent guest reward points or perhaps are shopping for better deals. This is the hotel attachment problem. Capturing those bookings reliably is incredibly hard, and sometimes they account for 40% of a corporation's reservations.

With respect to actioning insights and reports, the challenge stemmed from the fact that firms rarely saw travel as a strategic unit even though it amounted to a sizeable expense for many (see Table 3). The typical corporate travel office had to fight hard for budget to fund its operations. Yet, given the travel landscape's complexity and fragmentation, firms had much opportunity to create efficiencies once armed with the right data. As the travel buyer's advocate and the company that would share in the corporate travel managers' success, TRIPBAM constantly looked for ways to help corporate travel offices do more with less. Reynolds explained:

In the early days we would show reports to our customers and they would say: This is great insight, but I don't have any staff to action it. That's why we are constantly building and improving alerts and automations. For example, we can fire off an email to a hotel that goes outside of bounds to say, hey, you need to fix this, or you get kicked out of the program. Which is a big deal to some of these hotels—it's a lot of volume for them.

¹³ The term preferred hotels refers to properties that the corporation has a contractual relationship and negotiated rates with.

¹⁴ Out of channel reservations are those performed by employees outside of the mandated corporate reservation system or TMC, generally via consumer online travel agencies (e.g., Expedia) or direct with large chains (e.g., Hilton.com)

AutoRebooking—the ability to confidently cancel a previous reservation and move the traveler into a comparable or better new room at a lower rate—proved to be a fundamental automation. In a typical transaction, when TRIPBAM discovered a lower rate, it alerted and asked the travel agent to manually approve and make the change. However, the company needed to ensure that AutoRebooking actually did find a comparable or better room based on all dimensions without requiring travel agents to verify that it did it first (e.g., bed type, amenities, cancellation policies). Reynolds explained:

When you are 100 percent certain that you are meeting the company's criteria and you have a lower rate, you can enable automatic rebooking. We are the only ones on the planet who can do that. We are touchless end-to-end.

Table 3. Top Corporations by Business Travel Spend in the US (Business Travel News, 2019)

Rank	Company	Travel and expenses*		Booked air volume*	TRIPBAM Client	Expense Supplier	TMC
		USA	Global	USA			
1	Deloitte	1,800		559		SAP	BCD
2	IBM			417	Yes	Concur	Amex
3	PwC			324	Yes	Concur	Amex
4	Apple			315	Yes		BCD
5	EY	932	2,100	311	Yes	Proprietary	Amex
6	McKinsey & Co.			285	Yes		Amex
7	Accenture	572	1,300	260		MyTE Internal System	CWT
8	Microsoft	450		250	Yes	Dynamics	Amex
9	Boeing		567	244		Concur	
10	ExxonMobil			240	Yes	Chrome River	CWT
11	Google			239	Yes		
12	Amazon			229			CWT
13	Lockheed Martin	392	464	200		Concur	BCD
14	GE			195		Concur	CWT
15	The World Bank		475	195		SAP	Amex
16	KPMG LLP	584		187	Yes	Concur	Amex
17	Bank of America			183	Yes		Amex
18	Facebook			175		Concur	CWT
19	JPMorgan Chase			164			CWT
20	BCG			150			Amex
21	Oracle			145	Yes		CWT

* In million USD. Empty cells represent unavailable data.

7 Charting an Uncertain Future

Despite the uncertainty brought that the COVID-19 pandemic caused, early investors in TRIPBAM remained excited about the opportunities. Chris Hemmeter, the Managing Director of early TRIPBAM investor Thayer Ventures, remarked:

TRIPBAM is well positioned for a mid-market private equity exit. All the components are there: topline growth, EBITDA margin, defensible market position and massive addressable field of play. The only one of these key measures effected by the COVID-19 crisis is topline growth and we have every reason to expect that to return in force.

As with any technology firm positioned at the nexus of multiple data streams, TRIPBAM had the ability to extract insight from the data it captured. It could monetize such insight to accelerate its growth during the unavoidable recession. Blanton explained:

We are starting to see clients becoming more dependent on our data to manage their hotel programs. For example, we have a dashboard for large clients who can see for every hotel they have a discounted rate, how often these preferred hotels are producing the promised discounts and how strong those discounts are compared to the market and the benchmarks from other clients. We rate hotels from A to F to give buyers a sense of the strength of their supplier partnerships.

This level of insight and knowledge enabled TRIPBAM account executives to play a consulting role to their accounts. They could aggregate individual customer-level metrics (see Table 2) into anonymized benchmarks and, thus, create comparative reports. A recently launched feature enabled travel managers to evaluate hotels, brands, and chains' performance based on discounts and the LRA percentage by city (Airoldi, 2019). In an industry characterized by long distribution chains with many and varied intermediaries, reliable and auditable information was at a premium. Reynolds offered an example:

We have a series of reports, called Hotel Intelligence, which shows our clients what their metrics look like compared to their peer group. So, we can tell a client that they are getting an average discount which is lower than that obtained by companies doing similar volume in the same destinations. They cannot get this type of insight anywhere else.

TRIPBAM typically bundled basic analytics about a client's program performance into a premium subscription that large corporations purchased. Smaller corporations did not receive in-depth reports, but TRIPBAM provided the reports to their TMC that could, in turn, support those smaller firms. The company sold specialized reports such as Hotel Intelligence and sourcing reports¹⁵ separately. TRIPBAM constantly looked for ways to better serve its customers by leveraging its data assets. It had begun to form ideas around the opportunity to train customers on how they could maximize their own data's value. One does not consume data when using it¹⁶, and Reynolds wondered:

How can we monetize this data by packaging it up in such a way that crates a lot of value for other stakeholders? While of course being acceptable to our primary customer. We are and we will remain the buyers' advocate.

With his leadership team homebound due to lockdown restrictions, the time had come to get creative and evaluate all possible options no matter how crazy they seemed.

¹⁵ The sourcing report enabled customers to gain visibility into hotels they had no preferred relationship with. If such hotels provided favorable discounts to others in the market, they could be flagged for a customer as potential leads they should inquire with.

¹⁶ Information goods refer to products or services that customers acquire strictly for the information they contain. Classic examples include software, books, and music. Unlike physical goods, using information goods does not consume them, which means one can reuse and sell them multiple times.

References

- ACTE Research. (2019). *Booking tools and technologies*. Association of Corporate Travel Executives. Retrieved from <https://3rxg9qea18zhtl6s2u8jammft-wpengine.netdna-ssl.com/wp-content/uploads/2019/06/ACTE-OBT-Whitepaper-04Jun19-1.pdf>
- Airoldi, D. M. (2019). Tripbam updates hotel intelligence solution. *Business Travel News*. Retrieved from <https://www.businesstravelnews.com/Procurement/Tripbam-Updates-Hotel-Intelligence-Solution>
- Business Travel News. (2019). *Corporate travel 100: Business travel news*. Retrieved from <https://www.businesstravelnews.com/Corporate-Travel-100/2019>
- Certify. (2019). *The average cost of business travel*. Retrieved from <https://www.certify.com/Infographic-TheAverageCostOfBusinessTravel.aspx>
- Gasdia, M., Liu, B., & Blutstein, M. (2015). U.S. consumer travel report (7th ed.). *Phocuswright*. Retrieved from <http://www.phocuswright.com/Travel-Research/U-S-Consumer-Travel-Report-Seventh-Edition>
- Lerner, S. (2020). Hospitality startup Pruvo closes \$1.1M seed round amid coronavirus outbreak. *PhocusWire*. Retrieved from <https://www.phocuswire.com/pruvo-1-1m-seed-round>
- Perrotta, A. (2020). Coupa Software acquires Yapta: Business travel. *Business Travel News*. Retrieved from <https://www.businesstravelnews.com/Technology/Coupa-Software-Acquires-Yapta>
- Piccoli, G., & Pigni, F. (2016) TRIPBAM: Leveraging digital data streams to unleash savings. *Communications of the Association for Information Systems*, 39, 556-574.
- STR. (n.d.). *Press releases*. Retrieved from <https://str.com/data-insights/news/press-releasesTravel-Weekly>. (2019). *Travel Weekly 2019's power list*. Retrieved from <https://www.travelweekly.com/Power-List-2019>
- U.S. Travel Association. (2019). *Travel forecast—fall 2019*. Retrieved from https://www.ustravel.org/system/files/media_root/document/Research_Travel-Forecast_Summary-Table.pdf
- World Travel & Tourism Council. (2019). *WTTC data tool*. Retrieved from <https://tool.wttc.org/>

About the Authors

Gabriele Piccoli is the Edward G. Schleider chair for information systems in the E. J. Ourso College of Business at Louisiana State University and associate professor at the University of Pavia. He is the director of the Digital Data Streams Lab at LSU. His research, teaching, and consulting expertise is in strategic information systems and the use of advanced IT to support customer service. His most recent research focus is on digital data streams and their potential for value creation. He is the author of the book *Information Systems for Managers: Text and Cases*. His research has appeared in both academic and applied outlets such as *MIS Quarterly*, *Journal of AIS*, *European Journal of Information Systems*, *Decision Sciences*, *California Management Review*, *MIS Quarterly Executive*, *Communications of the ACM*, and *Harvard Business Review*. He has published 16 full-length teaching case studies through *Communications of AIS* and Harvard Business School Publishing.

Federico Pigni is Dean of Faculty and Professor of information systems at Grenoble Ecole de Management in France (GEM), and fellow at the Digital Data Stream Lab at Louisiana State University (LSU). He holds a Ph.D. in Management Information Systems and Supply Chain Management. Before joining GEM, he taught at Carlo Cattaneo University - LIUC, Università Commerciale Luigi Bocconi, and the Catholic University in Milan. He was Senior Researcher at Carlo Cattaneo University's Lab#ID RFI (Radio Frequency Identification) laboratory and post-doctorate at France Télécom R&D - Pole Service Sciences in Sophia Antipolis (France). He participated to research projects funded by Italian, regional, and EU agencies, private industry, and government partners. He has published articles in journals such as *California Management Review*, *MIS Quarterly Executive*, *Journal of Enterprise Information Management*, and *Production Planning & Control*. He teaches in the area of Information Systems, and he is currently researching value creation and appropriation opportunities stemming from big data, digital twins, and 5G networks.

Barbara Wixom is a Principal Research Scientist at the MIT Center for Information Systems Research (CISR). Her research explores how companies generate value from their data assets. Barbara runs a data research advisory board comprised of 100 Chief Data Officers from CISR sponsor companies who inform and participate in her research. She has published in top practice and academic journals, including *Communications of the Association for Information Systems*, and she regularly presents her work to a diverse array of audiences around the globe. Barbara has been honored for her teaching, case writing and contributions to the decision support community.

Joaquin Rodriguez is an assistant Professor of information systems at Grenoble Ecole de Management in France (GEM). His research focuses on the strategic use of digital technologies to achieve a competitive advantage. In particular, his work investigates how organizations can leverage digital platforms that they do not own or control to improve their strategic position. His research has appeared in both academic and applied outlets such as *European Journal of Information Systems*, *Information & Management*, *MIS Quarterly Executive*, and *MIT Sloan Management Review*.

Copyright © 2021 by the Association for Information Systems. Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and full citation on the first page. Copyright for components of this work owned by others than the Association for Information Systems must be honored. Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers, or to redistribute to lists requires prior specific permission and/or fee. Request permission to publish from: AIS Administrative Office, P.O. Box 2712 Atlanta, GA, 30301-2712 Attn: Reprints are via e-mail from publications@aisnet.org.