



## Core Technology & Data Reporting

Putting innovation into action as travel returns.

**WITH TRAVEL ACTIVITY SHUT DOWN AMID THE COVID-19 PANDEMIC, CORPORATE** travel managers found themselves with an unexpected—and unprecedented—opportunity to devote time and attention to exploring and adopting technological innovation to improve their programs.

Presented with that opportunity, suppliers, including specialists and TMCs alike, stepped up to meet the new demand—even as many dealt with their own revenue struggles amid the pandemic—doubling down on research and development to bolster their offerings for post-Covid era.

With corporate travel's return gaining momentum, those innovations are being put into practice.

Among the tech-based tools likely to be most prevalent in the short to mid-term are the in-booking-tool virus tracking services that rolled out amid the early phases of the pandemic. Offering functions such as in-booking risk assessment, interactive maps, real-time travel advisories and risk ratings, such platforms will remain necessary as long as the virus lingers to any significant extent—and are likely to continue to be leveraged to assess non-Covid-related risks in the longer term.

Digital health passports are sure to be another key tech tool in immediate travel landscape. Designed to certify that a traveler meets the relevant Covid-related entry criteria for a given jurisdiction, several such smartphone-based passports have been developed by a number of different providers using assorted models. Establishing interoperability between the various passports is among the key challenges that remain to be worked out, along with ensuring the privacy and security of users' personal medical data.

Along with the emphasis on duty of care and Covid-related regulatory compliance, many travel and spending managers also are facing increased budgetary pressures and a newfound onus on keeping T&E outlays in line. To help meet those goals, expense providers have rolled out auditing tools designed to increase spending compliance by leveraging artificial intelligence and machine learning to automate the majority of the auditing process.

And with environmental sustainability widely expected to be the next major point of industrywide focus post-Covid, tools that track the carbon emissions from travel—especially within the booking flow—are likely to become a must-have capability for travel buyers, many of whom are on the front lines of implementing their organizations' sustainability strategies. —*Adam Perrotta*

### I. STRATEGIC PLANNING

Align travel technology with your company's goals and objectives.

- A.** Develop a travel technology strategy by identifying and examining areas in which your company can realize the greatest service-level and financial gains. Benchmark your operation against best-in-class organizations. Once discrepancies are identified, create action

plans. Consider the company's readiness to promote and enforce use of technology, how travel fits with corporate IT strategies, costs and estimated ROI, the availability of IT support, and senior management interest. Including major stakeholders from the earliest stages improves the process and helps earn travel program support. In particular, involve IT in testing new systems. Be sure IT understands the level of involvement; when products need very little IT support, your project may be scheduled earlier.

- B.** Determine if data reporting or business intelligence tools are already available within your company that could digest travel data.
- C.** Security concerns preclude some companies from linking networks with such outside organizations as travel management companies, and some companies have strong firewalls that inhibit linking to outside systems. Anticipate firewall and data access restrictions and requirements. Determine compatibility of external systems with existing internal systems.
- D.** Consider including divisions or subsidiaries in other countries, and support technology and users in multiple languages. Ensure compliance with local data privacy laws.
- E.** Don't automate needlessly. Make sure the return is obvious and probable. This may be an important consideration for countries in your program that may not be capable of supporting the technology and/or may not have sufficient volume to justify the required investment and process changes.

### II. ONLINE BOOKING TOOLS

Online booking tools can reduce travel-processing costs in several ways.

- A.** TMCs charge less for facilitating automated reservations than for transactions that involve agent interaction, thus cutting travel booking costs. Online bookings typically are divided into three categories: "touchless" transactions, which are fully automated and incur the lowest cost, those with limited agent intervention and fully assisted transactions, which carry higher fees.
- B.** Automated fulfillment, meaning ticketing and quality-control processes, allow corporations and their TMCs to handle more volume with the same headcount. Non-automated transactions—often related to international, multi-leg and "open-jaw" itineraries—are more complex and require more time and expertise.



- C.** Online tools offer policy controls and preferred supplier management that companies can configure for their needs.
- D.** When evaluating how widely to deploy booking tools, consider:
- 1. Easy access:** If the company culture encourages self-sufficiency, giving everyone access to the reservations system should improve efficiency by reducing or eliminating telephone contact with travel agents. This includes access via mobile devices. But also consider end users. Senior executives and/or their assistants may resist online booking at first, for example.
  - 2. Policy mandates:** Companies that drive the highest adoption rates sometimes have some form of mandate in place. Policy mandates can be full or partial. Some include specific language to book, for example, all domestic trips online, while others mandate such bookings only for simple round-trips or for specific city pairs. Some companies have cultures that are not conducive to mandates but effectively can drive compliance through well-communicated travel policies that management strongly encourages.
  - 3. Fee differential as incentive:** Some companies that charge different per-transaction fees at the point of sale, based on the form of booking, have achieved high levels of adoption without a mandate. Often, the fee for a telephone booking with an agent is at least twice as high as the fee for an online booking. Charging higher fees for online transactions that require human intervention also can prompt travelers to strive for unassisted transactions.
  - 4. Senior-level support:** High-level support from a senior executive, preferably the CEO or CFO, can be helpful if not essential.
  - 5. Pilot groups:** Some organizations proceed methodically after beginning tech implementations with a small, controlled group of interested users, often the most frequent travelers. Others may try to roll out a system companywide within a few months.
  - 6.** Some tools offer online-offline functionality, where all reservations, regardless of complexity, start in the online tool. A rules engine determines which reservations are eligible for online booking and which an

agent should handle. Offline reservations are provided to an agent in a structured format, easing the process.

- E.** Online booking systems either contain or can tie into separate pre-trip approval systems, allowing additional methods of controlling costs and tracking travelers. Some systems use passive approval, or pre-trip notification, rather than active approval, or pre-trip authorization, to avoid bottlenecks. Other systems provide comprehensive pre-trip authorization processes that work with existing enterprise resource planning systems and workflows.
- F.** sConsiderations.
- 1.** Determine which bookings are eligible and ineligible for online booking. For many companies, all domestic bookings with four legs or less are eligible, as are all simple, round-trip international itineraries. Focus on increasing the number of eligible bookings.
  - 2.** Is the speed and user interface of the self-booking tool in line with traveler expectations? Negative comparisons against consumer products can frustrate travelers. Corporate online tools generally are behind the leisure market in usability and design.
  - 3.** Can the self-booking tool access and consolidate inventory from GDS and non-GDS sources and support direct supplier connections? How does the online booking system manage unused ticket credits, changes and exchanges?
  - 4.** Is the TMC contract based on a shared-cost configuration or another arrangement under which savings generated by the use of online booking systems are passed on? If planning rapid migration to online booking, a fully loaded transaction-fee relationship with a TMC allows you more quickly to take out costs on the full-service side. Make sure the TMC plays a role in increasing online adoption.
  - 5.** Identify customer support services provided by technology providers. Will customer service be provided by in-house IT, the technology provider or the TMC?
  - 6.** Determine whether the TMC or your company will own, license or control the technology. There are several considerations when assessing direct contracts with technology providers versus using a tool via a TMC's reseller agreement. This can have significant

cost and service implications.

### III. DATA REPORTING

Travel data reporting generally refers to the practice of taking raw travel data and converting it into business intelligence that informs supplier contract negotiations, travel policy development, risk management, traveler compliance tracking and budget forecasting. Traditionally, travel data reporting has been separated into pre-trip and post-trip reporting. The three primary options for receiving travel data reporting are from a TMC, receiving it from an independent third-party supplier or developing a reporting system in-house. Many companies use a combination. The best sources of travel data depend on the category and the task. For sourcing, the best air data comes from the TMCs while the best car rental data comes from the rental car suppliers. Hotel data reporting typically requires TMC pre-trip data and corporate credit card post-trip data to be integrated. Traveler behavior analysis and traveler security tasks likely require a combination of TMC pre-trip data, credit card and mobile phone data for traveler tracking and expense report data for traveler behavior and compliance reporting.

- A.** Travel managers should pursue reporting solutions that let them produce standard reports and custom reports, and that enable them to visualize the data. Advanced reporting tools provide more analytics, such as benchmarks to determine relevance to peer groups, trend analyses to determine the effectiveness of programs and recommendations to improve performance.
- 1.** TMCs aggregate data from raw booking records that originally come from GDSs, online booking tools and internal accounting systems. Other travel data can come from airlines, hotels, car rental companies, ground transportation providers, itinerary aggregators, dining solutions providers and others. Reconciling multiple data sources, including credit card data and expense data, can provide for better analytics and a more complete picture of a travel program. A few TMCs are starting to offer these services for additional costs.
  - 2.** A number of third-party data consolidation services aggregate data from multiple TMCs and countries and provide corporations with management



reports that can help identify market opportunities and provide better global analytics. However, data protection regulations vary by country, and data privacy may create restrictions to what data can flow into a central system.

Data sources have improved in recent years, which has eased global data aggregation, but challenges remain.

3. In-house business intelligence tools, reporting and data visualization tools have matured in recent years and may provide additional options for travel reporting. Many systems have been optimized to work within corporate networks and to integrate single-sign-on functionality.
  4. Whether you choose to work with a TMC or third party or construct your own solution, look for options that are both Web-based and can display on mobile devices. Both reporting tools and visualizations should have ad hoc capabilities, the ability to add and remove data fields, and sources in reports and charts. Any solution should store sensitive information in an encrypted format and filter displayed information based on user access. Also look for solutions that monitor data quality to help filter out or identify bad or missing data before it gets into a database.
  5. Reports are used not only by travel management departments but also by other groups within a company, such as finance, HR, safety and security, facilities management and purchasing. Look for the ability to automatically schedule reports to be pushed out to these stakeholders. For dashboards and visualization solutions, make sure the tool can configure and displays results based on viewer privileges. For example, you may not want one business unit leader seeing another business unit's data and information. Some solutions charge by number of users, which can escalate costs.
- B. Considerations for handling your own management data reporting.**
1. Hardware and software costs: As is true for all automated services provided by a TMC, even if hardware and software are provided as part of a service package, costs will be factored into your TMC agreement. Consider engaging a consultant or other third party. Understand any internal cost if your IT department is involved.

## 2. Time and personnel.

- a. There will be a learning curve and a continuing investment in time to make effective use of any system, though graphics and point-and-click techniques for interaction should provide relative ease of use.
  - b. More than one person in the travel department must be able to work with the system. Consider information skills and data analysis skills when staffing. Additionally, internal audits may benefit from direct access to the systems and subsequently may ask for access.
3. Consult with other companies of similar size regarding their experiences with reporting/business intelligence systems. Ask vendors to provide a list of all corporate customers. When buying any technology, references from trusted sources are critical. Also attend conferences to get an idea of products and technology advancements.
  4. Operating features.
    - a. Don't take claims of the tools' user-friendliness at face value. Work with the system and ask for a live demo. It is also a good practice to know exactly what features you are looking for prior to examining products.
    - b. Think about what to do with the system's output and who will see it. If the reporting system has an administration function for creating users and privileges, know how it works and estimate the time it will take to administer the system.
    - c. Evaluate reporting formats and graphical capabilities to ensure you can produce the figures and charts you need. Ask if your TMC can produce average figures for the same data points. Find out if the system will enable you to compile global data, if needed, and if there are any built-in data quality checks to insure data aggregation is accurate. Almost all reporting systems have some graphing/charting functionality. Understand the graphical capabilities and limitations.
    - d. Ask questions about system maintenance and support, software updates and follow-up expenses. If the system has a user-based licensing model, understand the costs to add more users. Always plan for

more users than originally thought.

- e. Get some guarantee for acceptable performance, usually done through service level agreements in contracts.
5. Data integrity: Business intelligence tools are only as good as the data that feeds them. Investigate the accuracy of current reports and establish front-end procedures to produce the most reliable and comprehensive data. Work with your suppliers to score data accuracy for critical data elements. Machine learning has driven advancements in data integrity, and you should look for partners incorporating those capabilities.

## IV. EXPENSE REPORTING

Many companies report immediate ROI from automated expense reporting. Cost savings appear relatively quickly and are easy to quantify. Automated expense management solutions enable clients to feed expense information to accounting systems and maximize the benefits of corporate card programs. These solutions pass booking and corporate card data into expense reports, route approvals and workflow and facilitate employee reimbursement via automatic funds transfer. In addition to automated data feeds that pre-populate expense reports for the user, some providers offer mobile software that integrates with travel service providers like Uber to capture transactions. Optical character recognition has eased receipt management by parsing receipt images into discrete transaction components and adding them to the expense report as the traveler moves through the business trip. By the end of the trip, travelers ideally need to make only simple additions and corrections before forwarding the report to a manager. The most advanced expense solutions also include robust analytics. Legal and regulatory requirements can make automated expense reporting systems, which have built-in audit controls, more attractive.

- A.** Typically, the finance organization initiates the effort to rework an expense accounting process, and the corporate travel manager is involved as a member of a cross-functional team. Travel managers, accounting and IT should examine each expense system option to determine whether it meets the company's goals and objectives.
- B.** Automating expense reporting can:
  1. Give companies more control over spending, especially for meals, travel



- and entertainment.
2. Make it easier for travelers to complete expense reports accurately.
  3. Encourage corporate travelers to use online booking software or the corporate card to pre-populate expense reports.
  4. Cut the administrative cost of expense reimbursement processes.
  5. More efficiently and accurately post expenses to company general ledger and accounts payable systems.
  6. More accurately track expenses by business area or billing code and meet regulatory reporting requirements.
  7. Manage cash more effectively by reconciling expenses with advances issued by the company.
  8. Pay corporate card balances and reimburse travelers more efficiently.
  9. Route reports electronically for manager approval.
  10. Provide management information for the specific purposes of enhancing forecasting and supplier negotiations.
  11. Make receiptless processing possible for pre-populated corporate card items.
  12. Provide comprehensive pre-trip travel authorization processes.
- C. Considerations.**
1. How unique is your process for managing travel and entertainment expenditures? Will you need customization, or at least the ability to configure the system in various ways? Does your company require integration with multiple corporate payment systems? Does your company require integration with multiple expense management systems in various countries? What about variety in policies requiring a complex configuration and/or integration with multiple systems?
  2. Does your company have an ERP system with a built-in expense management module?
  3. To what extent will the expense reporting tool integrate with your firm's credit card provider and potentially a virtual payment provider?
  4. Would your online booking and management reporting solutions interact with a proposed electronic expense solution? How? Is there a reason to expend the significant effort needed to integrate expense reporting with other travel management technology, such as the online booking tool?
  5. Can the system validate critical com-

pany information? Many companies rebill travel costs, and accurate accounting of cost center information, project codes or job numbers is vital to accurate client invoicing.

6. Can the system automatically group expenses related to the same trip? If so, what data sources are required for the reporting technology to do so?

## V. SUGGESTED QUESTIONS WHEN BUYING TECHNOLOGY

- A. What is the technological expertise and travel experience of the developer?
- B. How well-funded is the travel technology supplier, and how likely is the supplier to continue to support you months and years from now?
- C. What is the supplier's responsibility for support, maintenance and enhancements after the initial purchase?
- D. What training will the supplier offer travel managers and travelers? Is training necessary or is the technology intuitive?
- E. Does the supplier invest in long-term system enhancements? How often are new releases of the system issued?
- F. How many corporations have installed the system?
- G. Will the supplier provide recent reference accounts with whom you can speak? Can any reference accounts provide objective data that demonstrate ROI for the system?
- H. Will you consider a system purchase, hosted service or software license?
- I. How quickly will a purchase generate ROI for your company?
- J. What are the time lines involved in testing and implementing the system?
- K. Can the supplier implement, support and enhance a global product?
- L. What mobile options are available?
- M. How is customization generally handled? Is the sign-on process easy? Many IT departments insist on single-sign-on where possible, providing access to all company applications.
- N. Does the system depend on any specific equipment or programming language, such as Java, HTML or XML?
- O. What are the data warehousing and data mining capabilities of the system? What are the supplier's confidentially and indemnification provisions for the data and the technology? Who owns the data, you or the supplier? How well will the database integrate with your IT environment? How, how often and to where will data be backed up? Understand the duration for which your company generally stores data.
- P. Will the supplier let you test the product on a demonstration site?
- Q. What about a free pilot to validate both the difficulty in implementing and in using the system?
- R. Who provides Level 1 and 2 support, and how extensive is each level?
- S. For online booking tools:
  1. Is the system fast and easy to use for booking and trip retrieval?
  2. What content is offered? Are non-GDS suppliers integrated? What fees are applied when searching or booking non-GDS content?
  3. Does the tool enable online and offline profile synchronization? How does the traveler profile management tool integrate with the GDS, booking tool, and HR or ERP system?
  4. Can the tool facilitate an approval process? What happens if the primary approver does not respond within a reasonable period of time?
  5. How does the tool ensure data integrity and security?
  6. What online fulfillment operations and strategy are in place by region?
  7. What technical or navigational support is provided for travelers and in what languages?
  8. What is the cost for ongoing support after the initial implementation?
  9. Will the supplier be involved in prioritizing ongoing enhancements and changes to the system functionality?
  10. Can the technology help move share to preferred suppliers?
  11. Does the system generate a booking that is easily ticketed and touchless?
  12. Can the booking system support corporate discounts?
  13. In the case of an agency switch, will access to system data be available?
  14. Are bookings and changes made through mobile devices options?
  15. What capabilities does the system offer to purchase unbundled airline services, such as preferred seating?
  16. Does the system auto-acquire bookings made through traditional channels?
  17. Which criteria can trigger a dynamic message to a user?
  18. Can the TMC and developer provide sufficient support? ■