

> REDUCING THE
COMPLEXITY OF TRAVEL
PARTNERSHIPS:
RESPONSIVE TRAVEL
ALLIANCES

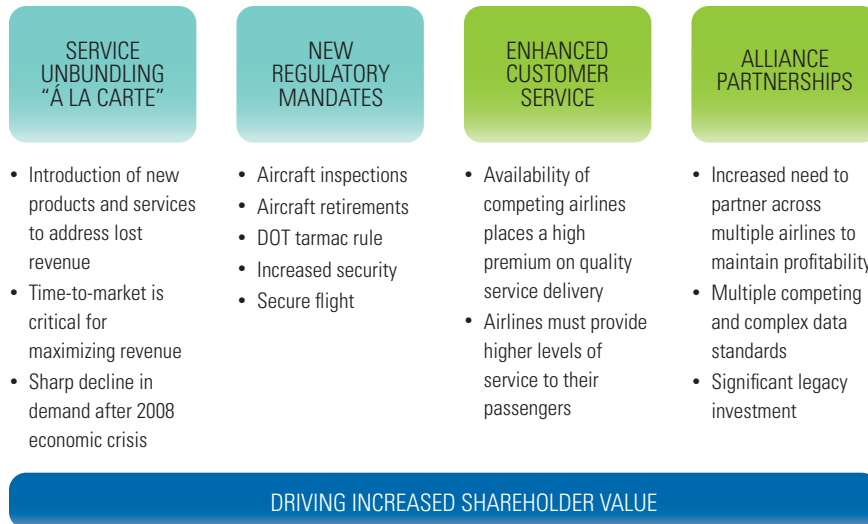
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INDUSTRY CHANGE IS DRIVING COMPLEXITY

The travel and leisure industry is experiencing pressure in four major areas: service unbundling as a result of revenue shortfall, increasing regulatory mandates, demands for enhanced customer service, and the need for ever more complex alliance partnerships to drive and maintain profitability. It's the perfect storm of change. In response to this challenging environment, all participants in the travel and leisure ecosystem have begun to turn their focus to the customer experience and operations management. Of the two, customer experience management represents the largest component of discretionary IT spend.¹ Alliances are to be one of the largest expenditures in customer experience management. Code Shares, alliance memberships and other revenue partnerships have witnessed a 19% CAGR over the past three years.² One of the greatest opportunities to improve return on IT spend is therefore at hand in making new alliance development activity more efficient. A key driver here is that customers now expect real time communication and reaccommodation by any participant in the trip in real time using their smartphones/social media outlets.

Challenging Market Drivers



¹ Sources: Estimates based upon data from IATA, Gartner, Inc., PhocusWright, Smith Travel Research and individual company annual reports.

² Ibid.

ALLIANCE MODEL PROLIFERATION

As a result of these industry pressures, both new business models and new operating models are emerging, and the “rules of engagement” among alliance members are constantly evolving. Alliance models represent a broad range of both old and new forms, each with its own particular set of needs and challenges. These models include:

- > “Traditional” alliance membership
- > Switching from one “traditional” alliance to another
- > Merging with another airline (including acquiring/being acquired)
- > Creating multi-carrier airlines
- > Code shares
- > Open skies agreements

The models listed above only include types represented by airlines. In order to grasp the full picture, we need to factor in alliance partnership types across all the other travel and leisure offerings.

TRAVEL AND LEISURE ECOSYSTEM



This creates an extremely complex landscape that industry participants must address in order to drive efficient and profitable partnerships.

The other reality that has to be factored into the equation is Individual operators can participate in several alliances, with varying degrees of autonomy. This requires having to navigate and manage multiple (possibly conflicting) sets of rules and customer privacy restrictions (e.g., Personally Identifiable Information laws) that vary from country to country. In the case of the United States and others, these privacy restrictions vary from state to state. It isn't just alliances on the revenue side of the equation either. There are models emerging where crew and equipment can be shared across the alliance as well—another layer that impacts both customers and alliance partners equally in several ways.

PERSPECTIVES—ALLIANCE VERSUS OPERATORS

In many cases, the alliances are formal entities in their own right. They have legal existence and define the rights and obligations of participating organizations or operators. Examples include OneWorld, SkyTeam and StarAlliance. In other kinds of alliances, the alliance itself might not have such formal status. Nevertheless, it is helpful to elevate all “party” relationships between operators to a formal level, so that the rules of association can be centrally managed. Even in the case of a simple two-party relationship, the rules/contract between the parties has meaning over and above that of the individual operators.

In many cases, the alliance, as an entity, will define how information among alliance participants is disseminated and how cross alliance processes will execute. Again, the major marketing alliances (OneWorld, SkyTeam, and Star Alliance) have policies to which member airlines must agree prior to becoming members.

THE CHALLENGE OF INDUSTRY LEGACY SYSTEMS

Each segment has traditionally maintained its own technology and business operating model. Overall, information sharing is difficult due to many complex, hard-coded legacy interfaces. This is further complicated by systems optimized for reliable, high speed transaction processing, but without the flexibility to meet new challenges. Many of these companies leverage systems, data formats, and processes dating back to 1971.

1938:	Commercial Aviation Born
1960s-1970s:	SABRE, the 707 and Deregulation
1980s-1990s:	The 747, 757, 767, and A320-A340 Enable Growth
The Big Secret:	Same Codebase for over 40 Years.

Travel alliance participants will need to get to a point where transaction and analytic systems can interoperate with the partner systems as well as being able to control the information sharing, depending on the depth and scale of the relationship or alliance agreement. Adding to the complexity, there are no guarantees that alliance partners will have the same infrastructure, systems of record, standards, or be on the same systems replacement cycles as each other.

“The travel and leisure industry remains one of the most highly interconnected yet disconnected industries in the world”

*Joshua Norrid
Industry Vice President, Travel & Leisure
Progress Software*

All of these forces demand that solutions be properly decoupled. The interfaces between and among the alliance members must be carefully spelled out and agreed to, while the implementations behind those interfaces will need to stay intact.

ALLIANCE INFORMATION SHARING AND PLATFORM

Information shared between/among alliance members depends very much on the nature of the membership and the alliance. Where the relationship is very close (e.g., both parties are part of the same company), a considerable amount of information sharing can and should take place. However, where members compete with each other, then commercially critical data (e.g., bid price) will not be shared.

There is also the issue of value to the alliance itself. Where one or more organizations are members of the same alliance, they will conform to the “rules” of the alliance. Many of these rules can be encoded and operated on behalf of the alliance as a whole.

Alliance members will choose which domain data to share, and at what level of detail, with other members of the same alliance. Where the same pair of members have multiple relationships (e.g., British Airways and American Airlines having a joint venture association and membership in OneWorld), the nature of information sharing must carefully consider the context. The assumption is, for example, that sharing using the OneWorld association will be limited to digest data which is appropriate to be shared with all OneWorld members. However, when using the joint venture relationship, a richer information set may be exchanged, including commercial (e.g., revenue) data, allowing, possibly, for revenue management across the relationship.

It also must be assumed that the members of an alliance will not necessarily be on the same platform—at any level of platform. Again, choosing the IAG (British Airways and Iberia) association with American Airlines, BA (reservations on Altea) and IAG (reservations on Resiber) have separate platforms. Yet, they are merged companies and thus have a very close association. The American Airlines environment is entirely separate (i.e., Sabre, with a planned move to AgileAir). These relationships all have to interoperate without there being a single, consistent set of platform technology. The level of interaction has to be at the message exchange level with each participant supporting its own processes, possibly in a different process management tool.

New alliance relationships are costly and non-scalable due to complex integration. The environment that travel companies are dealing with is driving a new business imperative to enable scalable, flexible alliances while reducing overall IT spend.

RESPONSIVE TRAVEL ALLIANCES: THE NEW SOLUTION SPACE

With the variety of alliances and relationships to be supported, a flexible, responsive architecture is required. This architecture conforms to the following core principles:

PRINCIPLE	FACTORS
Standards-based Information Exchange	<ul style="list-style-type: none"> • Encompassing canonical structures provide the base pattern for information exchange. • Information exchange patterns are derived from these canonical structures. • Transforms from proprietary/in-house standards to the canonical structures must be easily defined. • Rules for information sharing govern the data that will be made available through any alliance. • There are no assumptions about the technology/platforms that handle information exchanges, except that they conform to standards: <ul style="list-style-type: none"> – Technology standards—e.g., WSDL – Industry standards—either formal standards (e.g. OTA), or informal standards (e.g., Tripit.com Type Libraries) • At an information exchange end point, the messages may be rendered into one of several technology standards: <ul style="list-style-type: none"> – XML according to appropriate standard schemas – JSON – EDIFACT – Or purely internal, delivered “as is” with no transformation
Trip-based Data Model	<ul style="list-style-type: none"> • PNR is a specific format that handles airline, car, hotel and a few other reservations • Trip is a more encompassing model that views the travel from the perspective of the traveler <ul style="list-style-type: none"> – May include a variety of other services (“destination services”, e.g., restaurant bookings, sightseeing tours, etc.) • The PNR provides one set of data and mappings into the trip <ul style="list-style-type: none"> – The Trip acts as a “container” for a variety of different travel-related components • Core services exist to provide standard Trip lifecycle capabilities including: <ul style="list-style-type: none"> – Create a Trip – Add a component to a Trip – Remove a component from a Trip – Modify a Trip component (and deal with knock-on effects) – Delete a Trip • The RTA platform is itself not responsible for storing and managing Trips: <ul style="list-style-type: none"> – It facilitates the movement of data across the network to allow Trips to be managed. – It ensures that Trip data is delivered to the proper end points.

PRINCIPLE	FACTORS
Service Invocation Capabilities	<ul style="list-style-type: none"> • Support for component effects, e.g.: <ul style="list-style-type: none"> – Late arrival of a flight causes a rental car reservation to slip into the next day. – Flight misconnection triggers automated travel insurance claims. • While the RTA itself does not specify or operate on these services directly, it makes assumptions that these services will exist and that proper information structures can be associated with these services, governed by the alliance rules.
Information Delivery through Eventing Model	<ul style="list-style-type: none"> • When an event occurs, that event is flowed through the network and associated information delivered to downstream receivers. <ul style="list-style-type: none"> – The actual message structures to be received downstream are as defined in the alliance rules. • When an event occurs, that event can trigger a process as defined in Progress® Savvion® (or other BPM tools), ensuring that proper handling of an associated process is achieved.
Auditable Architecture	<ul style="list-style-type: none"> • Transforms, service invocations, event deliveries are all tracked through the Actional® tools, up to the point where the messages exit a Progress® Actional scope. • The Progress Control Tower™ (PCT) provides the visibility into the information flows through the RTA and highlights bottlenecks, exceptions.
Performance Architecture	<ul style="list-style-type: none"> • Delays introduced through the infrastructure are minimized. • Unnecessary transforms are not performed. • Activities performed in parallel where possible <ul style="list-style-type: none"> – e.g., canceling a Trip requires cancellation of all components. Architecture does not preclude cancellation in parallel.
Open and Extensible Architecture	<ul style="list-style-type: none"> • Over time new kinds of Trip components will be added. • Ancillaries will be accounted for. <ul style="list-style-type: none"> – Inventoried ancillaries (e.g. blankets) – Non-inventoried ancillaries (e.g., wi-fi service) • New kinds of alliances will develop as the markets change, e.g.: <ul style="list-style-type: none"> – Industry consolidations possible – LCC alliances – Alliances among disparate kinds of travel/leisure suppliers e.g., between a hotel, car rental company and a restaurant • New data subsets will be required. • New domains to be incorporated. <ul style="list-style-type: none"> – Crew sharing – Operational facility sharing – Common air traffic initiatives (SWIM)
Reliable Architecture	<ul style="list-style-type: none"> • Messages properly delivered • Failures detected and appropriate mechanisms executed • Compensating transactions in business process handling <ul style="list-style-type: none"> – e.g., Trip cancellation and one component is not cancellable.

PRINCIPLE	FACTORS
Secure Architecture	<ul style="list-style-type: none"> • Only properly authenticated users can perform assigned tasks. • Security contexts required by downstream systems are properly maintained. • Personally Identifiable information (PII) is not transmitted improperly. • Differing state, national, and community laws. • Payment Card Industry (PCI) data security standards are properly enforced. • Alliance rules are definable such that the types of data allowed to be transmitted can be adjusted as necessary.
Repeatable and “Quick-start” Architecture	<ul style="list-style-type: none"> • Standard models stored in Progress® DataXtend® Semantic Integrator • Standard transforms among model components under alliance rules defined in DataXtend • Standard adaptation to industry common software solutions including: <ul style="list-style-type: none"> – Amadeus Altea – Sabre ASx – Resiber – Pegasus RezView • Reference processes defined in Savvion • Reference Control Tower artifacts available through Progress Control Tower • Standardized monitoring “hard points” through Actional • Event correlation and analysis through Progress® Apama® • Message delivery, service enablement and management through Progress® Sonic® ESB • Alliance Rules management through a combination of Savvion and Actional

CONCLUDING THOUGHTS

The Responsive Travel Alliance Solution Accelerator (RTA-SA) from Progress Software provides all parties in travel and leisure the ability to jump start their alliance relationships by using the “out of the box” messages and messaging to define their relationships, processes, event streams and visualizations using the industry-leading technology stack. Whether the alliance is a simple association between a pair of operators, or whether it is a complex arrangement involving many parties, the RTA-SA provides an operator with the ability to leverage work that has already been done, reducing the time to deployment of an alliance from months to weeks and, ultimately, to days. The RTA-SA is open-ended and extensible, allowing each operator to define its special extensions and customizations in its own implementation, while still benefitting from the time to deployment reductions made possible by the use of a common model.

ADDITIONAL RESOURCES:

- > Progress Perspective: [A Vision for Airlines](#)
- > Webinar: [Responsive Airlines: Secrets to Real-time Visibility and Control](#)
- > Web: [Responsive Airline Operations](#)



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Progress Software Corporation (NASDAQ: PRGS) is a global software company that enables enterprises to be operationally responsive to changing conditions and customer interactions as they occur. Our goal is to enable our customers to capitalize on new opportunities, drive greater efficiencies, and reduce risk. Progress offers a comprehensive portfolio of best-in-class infrastructure software spanning event-driven visibility and real-time response, open integration, data access and integration, and application development and management—all supporting on-premises and SaaS/cloud deployments. Progress maximizes the benefits of operational responsiveness while minimizing IT complexity and total cost of ownership.

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