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The Role of Systems Integrators in Airline Commercial Transformation

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Introduction

The airline industry is entering one of the most profound commercial shifts since the advent of computerised reservations, moving from legacy PNR and ticket-centric models to dynamic, offer and order-based retailing. This shift is not only a technology refresh; it touches strategy, organisation, processes, and culture.

This paper has been produced by T2RL with the help and cooperation of six leading Systems Integrators that have expertise in the airline industry. They are

- Coforge
- Endava
- Globant
- Hitit
- Nagarro
- Sutherland

Each company has its own approach to the challenges that airlines face and each has a different set of resources and capabilities. The purpose of this paper is to examine the value that an SI relationship can bring to an airline as it goes through the major business transformation inherent in the move to modern airline retailing.

For the purposes of this paper a Systems Integrator is defined as:

A business that builds computing systems for clients by combining hardware, software, networking and storage products from multiple vendors, which may include components developed by the client and the SI itself.

Background

The airline industry has begun a process of commercial transformation. Decades-old structures including PNRs, tickets and EMDs will be replaced by Orders that look much more like those in other retail industries. Fares and booking classes are giving way to individually crafted Offers that take into account the relationship that the customer has with the airline as well as the full product set they wish to buy. While the headlines are about new technologies and data structures the changes go much further than the IT department. Many people and groups across the organisation need to rethink the way they do their work and be trained in the new processes and systems. All this change in technology and systems has to take place while business as usual carries on. Many airlines need all their resources to manage day to day operations. If they are to tackle a fundamental change program they will need some external support. Fortunately such support is available from a group of services companies that have developed deep expertise and resources to solve these challenges in the airline industry and beyond.

The Challenge

Airlines, in common with most other large businesses, have substantial existing investments in technology systems. A widely applied rule of thumb is that in a mature company, between 60% and 80% of the IT resources are used for maintenance and support of existing systems. Only between 20% and 40% are available to develop new capabilities and enhance existing ones. In most airlines the number of staff working on information technology is around 2% of the total workforce. Simple arithmetic shows that means something of the order of 0.6% of staff are able to work on development. And that has to cover all aspects of the airline's technology suite including operations, scheduling, flight planning, crew management, engineering, administration and finance – as well as the commercial environment that is involved in the OOSD transformation. Even a top-tier airline like American Airlines or Lufthansa might only be able to allocate 200-300 staff to a project as big as this transformation while a tier 2 airline might be able to spare about 20.

The software products that are at the heart of the OOSD transformation are provided by substantial technology vendors. Could they supply the resources that the airlines need to implement their services? Evidence suggests that in most cases the answer is no. T2RL has compared the employee counts for the major vendors of airline IT services. The number of employees per client airline ranges from a low value of around one staff member per client airline to a high of just over a hundred. However the companies at the higher end of the range are providing many services apart from PSS/OOSD and an estimate of the number involved in these capabilities would probably be around 30% of the total. Considering that these employees are selling, developing, maintaining and supporting the products it is unlikely that they have resources available to work on airlines' business transformation projects. Exceptionally, some software vendors may establish an SI capability alongside their core business. This is likely to be focused on the integration of their own products with the airline's wider IT landscape.

Given that the airlines themselves do not have substantial resources and most software vendors cannot provide meaningful help it is clear that support must come from somewhere else. In today's world there is a ready source of resource and expertise in the form of IT Services companies or Systems Integrators (SIs).

As well as the problem of resourcing, airlines face organisational issues in addressing large cross-functional transformation. Organisational and technology silos often dominate decision-making. Revenue management, distribution, digital, operations, and finance may each optimise for their own objectives and systems in isolation. This makes it difficult to tackle modern retailing as an end-to-end business challenge from offer creation through order management, servicing, accounting, and disruption handling. No single function "owns" the complete lifecycle.

An effective SI can help reframe the transformation from a set of disconnected projects into an integrated enterprise program. This includes mapping the full value chain, identifying where hand-offs between teams and systems create friction, and designing target-state processes and platforms that work horizontally, not just within individual departments. By doing so, the SI helps the airline move from local, department-level problem solving to enterprise-wide solution design, where data, architecture, and governance are shared assets rather than owned silos.

Practically, this might involve establishing cross-functional design authorities, harmonising KPIs across commercial and operations, and introducing common integration patterns and data models that serve multiple use cases rather than a single project. The SI's ability to challenge legacy boundaries becomes a critical accelerant, ensuring that investments in modern retailing do not simply recreate old silos on new technology.

Approaches to Reinforcement

Airlines that look to reinforce their capabilities using outside resources have several approaches open to them. They may broadly be positioned on a scale of increasing levels of trust and confidence between the client and the SI.

At the most basic level the airline retains full program and project management responsibilities. The external resource is directed to specific tasks within the project. This approach requires the airline to have capability and resource available to run the overall program. It operates at a relatively low level of trust with the completion of each task being tracked closely. This was the business model some thirty years ago when remote development shops began to be set up in India and elsewhere. It can be an effective approach where the airline has the necessary capabilities but it is quite inefficient.

At a higher level of trust a Systems Integrator may be given responsibility for a specific workstream within a project. Monitoring is more hands off and is carried out within the overall program management function.

Where there is a high degree of confidence between the airline and the SI there may be tight integration between the airline resources and those of the service supplier. The SI will be engaged at the strategic level and a true partnership may develop. All the SIs that T2RL spoke to expressed a strong preference for this type of relationship. They are increasingly concerned with the delivery of services that are aligned to business goals, moving to newer business models of “value” and success/outcome/output. This allows them to deliver more value to clients and take on a share of the risks and rewards.

The approaches described are not discrete steps on a ladder. Rather they are points on a slope. Many intermediate points on that slope may be contemplated according to the airline’s needs and the SI’s capabilities.

Some specific areas in which SIs have developed expertise that can be put to work for airline clients include:

- Change Management. Transformation requires changes in the way people work and perceive systems and how they use them. An SI with change management capabilities can play a critical role in making the program successful.
- Program management. Where there is significant trust between airline and SI the expertise gained from many previous programs can be brought to bear with the SI taking overall program management responsibility.
- Cross-industry learnings. Increasingly airlines look to learn from experience in other sectors, especially retail. An SI can bring the relevant knowledge from other industries. The above point could be complemented by how SIs can help airlines use the big data pool they have to transform themselves into a retailing hub thereby, helping them achieve the outcome NDC promises.
- Quality Assurance. Large-scale changes require extensive quality assurance. SIs can bring in expertise and help identify edge cases at early stages.

The Market Landscape

The Systems Integrator market sector currently employs between four and five million people worldwide. The ten biggest firms together had around 3.3 million staff in 2024. Total revenue for the sector was around half a trillion US dollars, although there is significant uncertainty around this figure. Many companies combine systems integration work with software development, business process outsourcing and other adjacent activities. This makes it difficult to separate out the SI revenue with a high degree of confidence but it is clear that it is a substantial sector.

The airline industry uses a relatively small proportion of total SI resource at somewhere between 2% and 5%. This compares to banking and finance which consumes around 44%, IT and Telecom at 20-25% and manufacturing which takes 10-15% of total SI resource. Healthcare, Government and Defence industries all represent bigger shares than airlines.

The airline requirement for IT may be characterised in different ways but one useful distinction is between applications that are unique to the sector and those that are common across all large enterprises. Estimates vary but for most airlines around 70-80% of IT spend is on sector-specific applications such as PSS, Flight Operations and MRO while 20-30% is on enterprise software such as H/R, ERP, desktop etc. This has implications for potential relationships with technology partners. Not all systems integrators have expertise in airline-specific business processes and technology.

The six SI companies that engaged with T2RL in the creation of this paper all have substantial experience and expertise in the airline space. We make no claim that others do not have that expertise but for our collaborators in this exercise, the airline sector represents a significant proportion of their business.

Engaging with a Systems Integrator

Many airlines have established relationships with one or more systems integrators. Existing relationships can form the foundation for successful future endeavours but this is not always the case. A partnership that has worked well in one area of the business may not be the right one for another. In this paper we are considering the approach to a major transformation project. Smaller self-contained efforts do not need the same level of executive attention, planning or strategic thought.

Specifically, this section is concerned with the transformation to modern retailing, or OOSD.

As with any acquisition of technology or services the most important first step is to determine what problem needs to be solved. Some airlines already have a well-formed strategy with contracts in place for the supply of technology components. They need to acquire the resources required to implement that strategy. Others are starting at the top of the funnel with no clear road map and little knowledge of the possibilities in the market. Of course there are many intermediate positions between the two extremes. It is important that the airline's senior management can make a realistic appraisal of where it stands on the spectrum before entering into any conversation with potential partners.

In the case of a transformation such as the move to modern retailing it is essential that there is executive level sponsorship. Overall program responsibility may lie with the IT organisation or the commercial management but either way it is essential that they establish close cooperation. Some of the questions that need to be addressed include:

- What are the primary goals of the program? Possibilities include:
  - Reduced distribution costs
  - Enhanced revenue from flights
  - Enhanced ancillary revenue
  - Improved customer satisfaction
  - More efficient use of resources
- What is the timescale of the program?
- What is the gap between necessary and available resources?
- What is the scope of the program?
  - Technology only
  - Organisational and process change
  - Training
- What solutions are available in the market to meet the program goals?

- Will existing solutions be sufficient or will the airline need bespoke development?
- How does this change impact the various teams at the airline and are they equipped to support it?

Some airlines will be able to answer these questions using internal knowledge and skills. Many will not. All the Systems Integrators with which T2RL worked on this paper offer a consulting capability that could engage in an exercise to address them.

Following on from the initial investigatory work, whether done internally or with a consultant, decisions may be made about longer-term engagements.

Engagements with a Systems Integrator come in many forms. The main determining factor in deciding what kind of contract to create is the level of autonomy that the SI will have.

At the most basic level are time and materials contracts where the SI agrees to supply qualified resources that will work under the close supervision of airline staff.

As the airline and the SI grow more comfortable in the working relationship contracts become more goal-oriented. The SI takes on responsibility for delivery of significant parts of the program. Measurement is no longer based on head-count supplied but on results achieved. Contracts may have incentives for over-performance and/or penalties for failure to meet targets. Without exception the companies involved in our research expressed a strong preference for deeper levels of partnership with their clients. They all acknowledged that to reach that level of engagement required the building of trust, often via shorter and more self-contained engagements.

One of the factors an airline needs to consider in engaging an SI is the availability and quality of resources. The largest companies in the field have hundreds of thousands of employees, many of whom are highly skilled in technology. However the specific needs of airlines mean that this is

less relevant than the number of people with expertise in the processes and applications used in the industry. The companies that we worked with range from over 300,000 employees to just a few hundred. However the smallest company is a specialist in the airline industry while the larger ones are more generalist. Among the large general providers the ratio of staff with airline industry expertise is typically of the order of 10%. An engagement with such a partner is likely to see a mix of staff deployed. Those with pre-existing expertise will take leading positions while non-specialists work under their direction. In the case that an SI lacks some specific capability it may take on the responsibility of sourcing and contracting it on behalf of the airline client.

The largest Systems Integrators have also invested in organisational capabilities such as academies, innovation labs and centres of excellence to develop and concentrate expertise in specific technologies and industry sectors. They can bring past experience and learnings such as program management templates for managing complex programs. They can also assist clients to establish GCC's (Global Capability Centres) in specific areas.

As well as direct client benefits these help provide career paths for employees and aid in the retention of experienced staff. The ability to sustain them is largely a matter of scale. It is much more feasible for a billion-dollar technology company than for an airline with an IT budget of a few tens of millions.

Another benefit of scale is the ability to invest in tools and utilities. Most of the SIs that participated in this research are deploying tools based on the current generation of AI. These act as accelerators, speeding development and testing cycles on behalf of clients.

Some systems integrators specialise even within the field of airline technology. A bias towards the financial aspects of the requirement is quite common. Some integrators have established a track record of working with specific technologies and indeed some technology vendors have established partnerships with SIs which may have privileged access to their products and support services.

An important consideration is the extent to which the program will need bespoke software development versus the use of off the shelf products. Most large IT services companies have the ability to develop software but their approaches can be very different. Some are building their own products and will retain the IPR of any software they create. Others work strictly for the client and any IPR created belongs to the client. Hybrid approaches involving shared ownership and rights also may be supported. It is very important that both parties understand the approach to IPR and that the contract between them reflects this understanding correctly.

An airline looking to engage a systems integrator for the first time, or in a new program, should consider issuing a request for proposals (RFP). This serves two purposes. It requires the airline to define carefully the terms of the engagement including objectives, timescales, roles and responsibilities and success metrics. Once these things are done and written down the RFP then allows the SI companies to make their proposals on a level playing field, allowing the airline to make a considered assessment of the best match for its requirement.

A well-managed RFP leads directly to a services contract that sets out deliverables and commercial terms in an unambiguous manner. This avoids one of the most common sources of friction between supplier and client which is differing expectations driven by ambiguous contractual language.

One aspect that the contract must address is the availability of suitably qualified staff for the project in question. Some airlines would like to specify named individuals in their contracts but this is rarely a useful provision. Much better is to specify the levels of skills and experience expected from the project team. For some purposes language and cultural fit are also important. In general the global airline industry is quite comfortable working in English but there are exceptions. In some regions it may be important to offer support in the client's own language.

As with other technology relationships the management of Service Levels is vital for success. This may involve the SI managing service levels with technology providers on behalf of the airline or it

may be that the airline has an SLA with the SI itself.

Depending on the role of the SI and whether it is;

(i) Doing the technical integration work between multiple providers; or

(ii) providing the SI technology to the airline; or

(iii) either or both of the above, plus managing the services of all providers on behalf of the Airline.

the levels of involvement in providing and/or supporting SLAs will vary, from no involvement in the first, to higher levels of responsibility in points (ii) and (iii).

An effective contract will establish a governance mechanism for the engagement. This should include an executive level board with the authority to resolve any issues that may arise in the relationship. Some airlines will wish to engage with more than one SI for different aspects of their program. This is quite normal but it is essential to specify roles and responsibilities carefully. It is often addressed by assigning lead status to one of the SIs but it can also be managed by the airline's own program manager taking on that role.

Establishing a partnership between an IT service provider and an airline is both an art and a science. There are certainly measurable thresholds that need to be attained in terms of skill levels and sector expertise. Equally important however are less tangible factors such as cultural fit and shared understandings. And of course there are commercial considerations to be taken into account. The large SI companies enjoy economies of scale that should make an engagement with them economically advantageous compared to going it alone. But that will only be the case if the airline starts with clear objectives and follows a structured path to selection and execution.

Evolution and Outlook

When the modern airline industry was taking shape in the 1950s and 1960s it was normal for large airlines to develop their own IT systems, sometimes in collaboration with hardware companies such as IBM or Sperry Univac. Smaller airlines could piggyback on those developments by buying a hosted service from a larger neighbour. Since the 1990s the number of airlines developing and managing their own services has diminished. The norm now is to buy software services from a specialist vendor like Sabre or Amadeus. With the coming transformation of commercial systems there is an expectation that more modular solutions will become available. This is a challenge for airlines that no longer have deep IT resources as the assembly of a set of best of breed capabilities into a coherent system is a complex task requiring high levels of expertise.

At the same time that this evolution has been going on the world's universities have been turning out large numbers of technically skilled graduates. While this has been a recognised phenomenon in India for several decades it is now happening in many other regions of the world including Latin America and Eastern Europe. Many of the graduates have been recruited by large IT services companies and as a result they have deep pools of resource. These are the resources that can be brought to bear on the challenges of many economic sectors including the airline industry.

How the model will evolve is uncertain. On the one hand a few very large airlines can justify the overhead of maintaining substantial IT capabilities that are able to take on challenges like the move to OOSD. On the other, most of the 1400 active passenger airlines in the world do not have that ability. Just as cloud provision of compute resource allows enterprises to scale up and scale down capacity according to demand, the large IT service companies allow the scaling up of skilled human resources according to need. It is a model that makes economic sense for the vast majority of airlines and it is likely to persist for many years.

Whether it will eventually be superseded depends on factors bigger than one industry. Could a super AI eventually make many of today's established processes redundant? Possibly, but that day is still distant. In the medium term the role of SIs and the relationship with airline clients seems secure.

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T2RL Travel Technology Research Ltd. (T2RL) is an independent sourcing and research company that specialises in airline technology and distribution. Based on data since the year 2000 T2RL has tracked industry trends for airlines as well as their IT providers, distribution partners, and customers, all of whom use T2RL's research to make informed business decisions to meet current and future needs. While T2RL has taken all reasonable steps to provide accurate and timely information, it is provided on an "as is" basis and is correct to the best of our knowledge as of 2nd February 2026. For further information, visit our website at www.t2rl.com.