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Annual Privatization Report 2016

Air Transportation

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A. Airport Privatization

1. Overview

For most of aviation's history, airports were government enterprises. In 1987 British Prime Minister Margaret Thatcher's government privatized the former British Airports Authority via an initial public offering (IPO) of shares. That stimulated what became a global phenomenon of airports being shifted, in whole or in part, to the private sector. By 2012 it had become so widespread that the International Civil Aviation Organization (ICAO) issued a report titled "Manual on Privatization in the Provision of Airports and Air Navigation Service" (Document 9980). It explains how airport privatization fits into international aviation law and replaces an earlier document, ICAO Circular 284, from 2002. In early 2016, Airports Council International-Europe released a report on airport privatization in Europe. It found that over 40% of European airports have at least some private shareholders, and that these airports handle three out of every four passengers.¹

In Europe, the primary mode of airport privatization has been via sale, either in whole or (more commonly) in part. UK airports that the government considers to have market power (currently only in London) are subject to regulation of their charges to airlines. Elsewhere in the world, the primary mode of privatization has been via a long-term lease or concession. This is the case in Australia, Latin America and the Caribbean. Some of the larger privatized airports have acquired full or partial ownership of other airports, becoming global airport companies. More recently, pension funds, infrastructure investment funds, and sovereign wealth funds have begun investing in privatized airports, as an additional category of investor-owned utility (along with electric and gas utilities, pipelines, railroads, seaports, etc.).

Table 1 is excerpted from a table of the world's largest (by revenue) airport groups as of 2014 (the most recent year for which data were available at the time of this writing). Some of these global airport groups also manage overseas airports, on a contract basis, without actually obtaining an ownership share. Several smaller airport companies had 2014 revenues below the threshold for inclusion in the top 100, so are not included in the table. Total 2014 revenue for the 40 airport companies was \$39.8 billion, which is 48% of the revenue of the entire top 100 airport groups. About two dozen of these airport companies are listed on stock exchanges around the world.

Airport Company	Global Rank	Main Airport(s)	2014 Revenue (\$M)	Privatization Status
Heathrow Airport Holdings	1	London Heathrow	\$4,425	Full
Aena Aeropuertos	2	Madrid	\$4,172	Partial
Aeroports de Paris	3	DeGaulle	\$3,679	Partial
Fraport	4	Frankfurt	\$3,156	Partial
New Kansai International	15	Kansai, Osaka	\$1,388	Under way
TAV Airports	17	Istanbul, Ankara	\$1,296	Full
Beijing Capital International	19	Beijing	\$1,241	Partial
Airports of Thailand	20	Bangkok	\$1,230	Partial
Manchester Airports Group	21	Manchester, London Stansted	\$1,185	Partial
Aeroporti di Roma	22	Rome Fiumicino, Rome Ciampino	\$1,061	Full
Flughafen Zurich	23	Zurich	\$1,048	Full
Southern Cross Airport Holdings	24	Sydney	\$1,043	Full
Gatwick Airport	27	London Gatwick	\$1,024	Full
Malaysia Airport Holdings	28	Kuala Lumpur	\$1,018	Partial
SEA Group	31	Milan Malpensa, Milan Linate	\$903	Partial
Guangzhou Baiyun International	32	Guangzhou	\$896	Partial
GMR Airports	33	New Delhi, Hyderabad	\$892	Partial
Flughafen Wien	36	Vienna	\$831	Full
Airports Company South Africa	42	Johannesburg, Cape Town	\$698	Partial
Aeroportos de Portugal	43	Lisbon	\$688	Full
Copenhagen Airports	44	Copenhagen	\$684	Partial
Brussels Airport	45	Brussels	\$652	Full
Australia Pacific Airports	46	Melbourne	\$651	Full
Aeropuertos Argentina 2000	48	Buenos Aires EZE and AEP	\$569	Full
Düsseldorf Airport	49	Düsseldorf	\$561	Partial
Brisbane Airport Corp.	51	Brisbane	\$516	Partial
ASUR Aeropuertos Del Sureste	59	Cancun	\$440	Full
Athens International Airport	63	Athens	\$416	Partial
GAP Grupo Aeroportuario del Pacifico	64	Guadalajara, Tijuana	\$415	Full
Perth Airport	68	Perth	\$399	Full
Auckland International	70	Auckland	\$395	Partial
Hamburg Airport	74	Hamburg	\$358	Partial
Budapest Airport	75	Budapest	\$350	Full
Aeroports de la Côte d'Azur	83	Nice	\$305	Partial
Operadora Mexicana de Aeropuertos	86	Acapulco, Monterrey	\$256	Full
Edinburgh Airport	89	Edinburgh	\$215	Full
Aeroports de Lyon	90	Lyon	\$208	Partial
SAVE Group	91	Venice	\$199	Partial
Birmingham Airport Holdings	95	Birmingham	\$194	Partial
Hannover Airport	99	Hannover	\$182	Partial
			\$39,839	

Source: "Airport Group Financials," *Airline Business*, November 2015.

As can be seen, the world's four largest airport groups—Heathrow Airport Holdings, AENA Aeropuertos, Aeroports de Paris, and Fraport—are all investor-owned companies with annual gross revenues of \$3 billion–\$4.5 billion. Ten other privatized airport groups are in the billion-dollar range of annual revenues, with another 12 between \$500 million and \$1 billion.

2. Airport Industry Changes

There were fewer major changes in ownership within the airport industry in 2014–15, compared with prior years. Spanish infrastructure company Abertis completed its exit from the airport business in order to focus on its surface transportation assets (mostly toll roads). In 2015 Abertis sold its 75% stake in the Montego Bay (Jamaica) airport to Grupo Aeroportuario del Pacifico (GAP), the concessionaire for Mexican airports including Guadalajara and Tijuana.

Infrastructure company Hochtief also exited the airport business, selling its Hochtief AirPort division in 2013 to Canada's Public Sector Pension Investment Board for \$1.4 billion. Renamed AviAlliance, the company is seeking airport investments in Canada and the United States.

Another European infrastructure firm considered moving out of the airport arena, but changed its mind. Atlantia, the holding company for Italian toll-road giant Autostrade per l'Italia, had announced plans to sell its 30% stake in Aeroporti di Roma, owner of Rome's two major airports. But despite receiving strong expressions of interest, Atlantia's board in November opted to retain its interest in the airport company.

Canadian construction firm Aecon Group sold its 45% stake in the 30-year concession for the New Quito International Airport in Ecuador to Grupo Odinso and fellow investor CCR of Brazil.

French infrastructure company Vinci is becoming a serious player in airports, thanks to its \$4 billion acquisition in 2013 of Aeroportos de Portugal (ANA), operator of the four largest airports in Portugal plus six in overseas territories. In 2015 it was part of winning consortia for concession projects in both Chile and Japan. And it is widely expected to be a serious bidder for upcoming privatizations of French airports Lyon and Nice.

Pension funds continue to judge airports as promising investments. In 2014 the Ontario Teachers' Pension Plan bought out co-investor Macquarie European Infrastructure Fund's 50% stake in UK's Bristol Airport, and more recently increased its ownership in UK Birmingham Airport to over 48%. Pension fund Caisse de depot et placement du Quebec has acquired 12.6% of Heathrow Airport. And there are many similar examples.

A September 2015 article from *Infrastructure Investor's* daily email update noted a trend toward higher valuations of airports in 2014–15; its explanation boiled down to increased demand from investors coupled with relatively few airport deals being offered.² It also noted that:

Large discrepancies in valuations—and the propensity a potential buyer may have to overpay—are rooted in different views on capital cost and growth expectations. At a time when liquidity is rife and assets are scarce, some investors are ready to cut their required IRR [internal rate of return] so as to

be more competitive in auctions. Economic momentum in the developing world and a budding recovery in the West has meanwhile pushed some to make optimistic assumptions about growth prospects. These dynamics have created room for investors to disagree about how much an airport is worth.

3. Global Airport Privatizations in 2015

The year's largest airport privatization activity by far took place in Spain, and serious preparations got under way in France and Japan for new privatizations in 2016.

European Developments

Spain's long-awaited privatization of its 46 airports (including Barcelona and Madrid) began in late 2014 with the separation of the air traffic control function from state aviation company AENA. (The now-separate air navigation service provider is called ENAIRE.) Next, the government sold 21% of airports company AENA to three "cornerstone" investors for \$2 billion: UK-based Children's Investment Fund, Ferrovial Aeropuertos, and Corporación Financiera Alba. Early in 2015 another 28% of AENA was made available via an initial public offering (IPO) of shares on the Madrid stock exchange. The shares were eagerly taken up at a price that valued AENA at \$9.9 billion. Children's Investment Fund added another 6.5% to its holdings, with other large acquisitions by Morgan Stanley (3.6%), Fidelity (1.25%) and George Soros (1.25%). Both Ferrovial and Alba dropped out when the share price exceeded their maximum acceptable values.³

France's new airport privatization wave also began late in 2014, when it offered 49.9% of Toulouse Airport to prospective airport company bidders. Ten companies expressed interest in acquiring the offered stake, and four consortia ended up submitting bids by the deadline: Aeroports de Paris/Predica, Friedman Pacific/Shandong High-Speed Group, Vinci/CDC/EDF, and SNC-Lavalin. The winner was the Friedman Pacific group—a surprise given that Friedman is based in Hong Kong and Shandong in mainland China. The strong interest in the Toulouse privatization helped ensure the passage of legislation mid-summer to permit the sale of the government's interest in the Lyon and Nice Airports. The government released a schedule in November, aiming to conclude the sales by summer 2016. At least three consortia have been formed to bid on one or both: Vinci/CDC/Predica, Atlantia/EDF Invest, and Industry Funds Management/Manchester Airport Group. Lyon is estimated to be worth \$845 million, while Nice—France's second largest airport—is put at \$1.8 billion.

The infrastructure investment community held its breath for some months during 2015, waiting to see if **Greece's** radical populist government would go through with the deal its predecessor had made in 2014 to lease 14 of its 37 regional airports under a 40-year concession. The winning bidder was Fraport, with a bid of \$1.3 billion. In May, the then-current government reaffirmed its commitment to the deal, which it was under

European Union pressure to honor, and reaffirmed it again in August. After another change of government in September, Greece's privatization minister, Stergios Pitsiorlas, told Reuters in October that the deal would be signed by year-end. In the end, it was signed in mid-December.⁴

Interest has been building in the **UK** after Global Infrastructure Partners announced in late summer that it would put on the market its 75% stake in London City Airport. By year-end four groups had been assembled to bid: Borealis/Ontario Teachers' Pension Plan, Atlantia, CKI, and PSP/Hochtief.⁵ Speculation puts the airport's value as high as \$3 billion, though that would be a very high multiple of 60 times EBITDA (earnings before interest, taxation, depreciation & amortization). Recent airport deals have been in the 25 to 30 times EBITDA range. Passenger numbers at the close-in, short-haul airport have doubled since 2005, from 2.1 million to 4.1 million in 2015.

Asian and Pacific Developments

The big news in Asia is the privatization of both airports serving the Osaka/Kansai region of **Japan**. In November the New Kansai International Airport Company announced the winner of a 40-year concession to manage and improve island-based Kansai International Airport and inland Osaka International Airport. Winning the concession was a joint venture of Vinci Airports and Orix Corporation. This group ended up being the only qualified team to actually submit a bid, after several others dropped out. The consortium reached financial close on the project in March 2016. The companies are putting in equity of \$649 million, and arranging senior and mezzanine debt of \$1.5 billion. Orix and Vinci will each hold 40% of the concession, with the balance split among banks, institutional investors and others. This is the second airport privatization in Japan, following the privatization of Sendai Airport. In September the team of Tokyu and Maeda was selected to run that airport. *Inspiratia Infrastructure* expects that up to 20 more Japanese airports will be privatized in coming years.

India's Modi government, elected in 2014, has not proceeded with the previous government's plan to privatize six more airports. The initial part-privatizations of New Delhi and Mumbai airports, and the creation of new ones at Bengaluru and Hyderabad, generally went well, and enabled the two Indian firms of GMR and GVK to become global players in airport privatization. The only project that appeared to move forward in 2015 was the long-awaited new airport for Mumbai. The City and Industrial Corporation of Maharashtra (CIDCO) selected a short-list of four qualified bidders for what is expected to be a \$2.3 billion project. They include GMR, GVK/MIAL, Hiranandani Developers, and Zurich Airport. Earthworks at the site began in mid-summer.

The government of **Vietnam**, which in 2014 announced plans to privatize the Airports Corporation of Vietnam (which owns and operates the country's 22 principal airports) followed up in 2015 by unveiling plans for a new airport near Ho Chi Minh City. To eventually cost \$18 billion and serve 100 million passengers a year, it would replace congested Tan Son Nhat International Airport. The first phase, planned to

start in 2016, would cost \$7.8 billion and be scheduled to open in 2023 with a runway and several passenger terminals. No details of the financing or the role of the private sector have been released.

The **Philippine** government plans to offer two concessions to develop and operate five new regional airports. One 30-year concession will cover three airports, and a second one the remaining two. Six groups submitted their qualifications, and the government will select the best-qualified ones to respond to a Request for Proposals. The estimated cost of the five airports is \$2.3 billion.

And a new privately developed airport opened in **Australia** early in 2015. Wellcamp Airport was developed by Wagners, a family-owned construction company. The \$172 million airport is in Toowoomba, west of Brisbane, Australia's third-largest city. It opened with air service from two airlines: Regional Express and QantasLink.

Latin American and Caribbean Developments

There were no further privatizations in **Brazil** during 2015, as the consortia that won concessions to expand and modernize the country's five largest airports continued work on upgrades needed to prepare the airports for the Summer Olympics in 2016. Brazil's dire financial condition has led to discussion of selling half of the 49% stake in each of these airports that was retained by airports agency Infraero in the original privatization process. The proceeds would be used to pay down some of the government's growing debt. Brazil's recession has also lowered expectations of what will be bid for the four additional airports scheduled for privatization in 2016.⁶

As yet, **Mexico's** new \$8.5 billion airport for Mexico City does not appear to be planned as a concession. To be located on government-owned land 10 miles northwest of the current airport and with a terminal to be designed by Foster + Partners, Benito Juarez Mexico City International is planned to open in 2018 with three runways and a terminal with 94 gates. The notional funding plan is that 60% of the cost would come from the national government's budget and 40% would be financed based on an airport departure tax levied on all passengers.⁷ If procured in this manner, the new airport would be the only major airport in Mexico not owned and operated by the private sector.

In 2014 the government of **Peru** awarded a 40-year, \$635 million concession to design, finance, build and operate a replacement airport for the tourist city of Cuzco, which is, for most tourists, the jumping-off point for visits to the historic Inca ruins of Machu Picchu. The consortium is a joint venture of Argentina's Corporación America and Andino Investment Holdings. It will be built on a greenfield site 18 miles from Cuzco. In 2015 the consortium, Kuntur Wasi, completed design and engineering studies, and was working to finalize the construction schedule with the Ministry of Transport and Communications. The new airport will be called Chinchero Cusco International Airport.

In 2014 **Chile**'s Ministry of Public Works reached agreement with the Civil Aviation General Directorate on terms for a 20-year concession to expand Santiago International. The \$700 million project will add a new international terminal and expand the existing terminal for domestic flights, while also expanding parking structures, taxiways and aircraft parking. The winning team was announced in February 2015: Aeroports de Paris (45%)/Vinci (40%)/Astaldi (15%). The consortium won by offering the government 77.5% of airport revenue. The concession's term began in October (the expiration of the previous concession), at which point the consortium took over operation of the existing terminals and adjacent areas. The team will renovate and operate the existing terminal, and design, finance, build and operate the new international terminal.

Paraguay enacted a concessions law in 2014, and its first large project is to renovate the international airport serving the capital city, Asunción. Since this is a small country, the project will not be huge, with an expected cost of \$200 million. The tender process for the new airport was begun in 2015. The government envisions a 30-year concession.

Jamaica is moving forward with its second large airport privatization project. After the success of its build-operate-transfer concession that resulted in a large new terminal at Sangster International Airport in tourism capital Montego Bay, it is now seeking a similar deal for the capital city's airport. Norman Manley International in Kingston needs both a new terminal and an upgraded main runway. The government began the procurement process in 2015, advised by Arup and Ernst & Young. It prequalified five bidders: Cedicolor, Zurich Airport/A-Port Chile, Korea Airport Corp./GK Capital, China Harbor Engineering/DAA International, and Corporación Aeroportuaria Del Este/Jamaica Producers Group/GBG Energy. Also, as noted previously, the concession for the Montego Bay Airport was sold by Abertis to GAP of Mexico.

4. U.S. Airport Privatization

Airport privatization on the global model has never taken off in the United States. This is partly because public-sector airports have access to tax-exempt revenue bonds, unlike their counterparts in other countries. And it is also partly due to all passenger airports receiving federal grants under the Airport Improvement Program (AIP). As a condition of receiving the grants, airports must agree to a number of "grant assurances," including that they will not make a profit from airport operations or transfer any airport revenues to the government that owns the airport.

Federal Pilot Program

Congress enacted an Airport Privatization Pilot Program in 1996 to test the idea that private capital and management could improve U.S. airports. The legislation created a limited set of exceptions to the AIP grant assurances, which would otherwise make long-term lease or sale of airports impossible. There are 10 slots in the program, which airport sponsors can apply for permission to use. One slot in the program is reserved for a general aviation (non-airline) airport, and only one of the remaining slots can be used for an airport meeting FAA’s definition of a “large hub.”

The only airport currently privatized under the program is Luis Munoz Marin International Airport in San Juan, Puerto Rico. Mexican airport company ASUR and Highstar Capital submitted the winning proposal in 2012, and the deal was finalized in early 2013. Under the 40-year lease agreement, the consortium (called Aerostar) made an up-front payment of \$615 million and agreed to invest \$1.4 billion in the airport over the term of the lease. Aerostar will also share airport revenue with the government, estimated at \$552 million. During 2014 and 2015, Aerostar made major renovations to the airport’s two aging terminals, including new retail stores and restaurants, new automated baggage scanners, and other improvements.

Chicago tried twice to lease its Midway Airport via the Pilot Program. The first effort, in 2007, selected a winning team, but the overly optimistic deal could not be financed during the credit markets crunch that occurred that year. A second attempt, under new Mayor Rahm Emanuel, ended up with only a single bidder, apparently due to overly restrictive conditions attached to the city’s proposed lease. Without competing bids, Mayor Emanuel decided it was politically unwise to continue the process, and Chicago gave up its slot in the Pilot Program in 2013.

Only one other slot in the Pilot Program is currently active—for the general aviation airport of Hendry County, Florida, just south of Lake Okeechobee in a rural agricultural area. The business plan is to convert this small, under-utilized general aviation airport into a large cargo reliever airport for Miami International, focused initially on perishable cargo from Latin America and aircraft maintenance, repair and overhaul. The plan has won the support of the county commission, and two major agribusiness firms adjacent to the airport are part of the Airglades International Airport LLC group that seeks to buy and develop the airport under the pilot program. In August 2014 the FAA approved the company’s proposal to manage and operate the airport on behalf of Hendry County, while the final stages of its plan to purchase the airport are being reviewed. During 2015, Airglades International Airport, LLC commissioned URS/AECOM to conduct an Environmental Assessment (EA) for the proposed perishable air cargo complex at the airport to be submitted to the FAA as part of the application process.

In 2014 Congress asked the Government Accountability Office to review the Pilot Program and assess why there have not been more actual privatizations. The report, “Airport Privatization: Limited Interest Despite FAA’s Pilot Program” (GAO-15-42), notes that over its 20-year life the program has had 10 applications, but only two actual privatizations (Stewart International in New York and San Juan, Puerto Rico) and only one pending (Airglades in Florida). GAO cited the tax-exempt status of airport bonds and the need for a

privatizer to defease or pay off existing bonds when it takes over a public-sector airport as barriers to using the program. GAO failed to note some major differences between the business models of commercialized public-sector airports overseas, compared with traditional airport business models in the United States; those differences make the transition from public sector to private sector more drastic in the United States. It also discussed public-private partnership (P3) projects as a way to involve private investment without making use of the Pilot Program.

Also in 2015 Chicago-based attorney John Schmidt of Mayer Brown, a veteran of airport privatization deals, offered four suggested changes to the Pilot Program aimed at creating a more serious U.S. market:

- Simplify the approval process by replacing the two-part 65% airline approval requirement with a more traditional majority-in-interest requirement;
- Allow partial interests in airports to be offered, as is common in Europe;
- Eliminate the numerical limitations (currently 10 airports total), including the limitation of only one major hub; and,
- Allow use of tax-exempt bonds for a privatized airport.⁸

Airport Facility Public Private Partnerships (P3s)

A small but growing U.S. trend is private-sector finance, development and operation of airport terminals. The Port Authority of New York & New Jersey pioneered this concept in the late 1990s for the new Terminal 4 at John F. Kennedy International Airport. It produced a state-of-the-art terminal building for which its developer/operator was responsible for all revenues (to cover operating costs, debt service, and hopefully a return on investment). The secondary airport in Orlando—Orlando Sanford—also used this model for both its domestic and international terminals.

The Port Authority is making use of this model again to replace the aging, under-sized central Terminal B at LaGuardia Airport. In response to its 2013 RFQ, the agency received numerous submissions and short-listed four teams for the \$2.5 billion terminal (as part of a \$3.6 billion LaGuardia redevelopment project). It received three proposals in April 2014, but selecting the winner was held up in October by the independent action of Gov. Andrew Cuomo announcing a \$500,000 redesign competition for the New York Airports, with entries due by year-end. The Port Authority had also planned to procure a replacement terminal at Newark Airport using a similar P3 model, but that process was put on hold. In May 2015 the Port Authority announced that a consortium headed by Vantage Airport Group, Skanska and Meridiam would do the LaGuardia central terminal, investing more than \$2 billion in the project, with the Port Authority putting another billion into parking structures and adjacent improvements. And when Cuomo announced the winning design for LaGuardia in July, it also included reconstruction of Delta's Terminals C and D, which Delta will pay for. The total cost of the overall project is now \$8 billion.

Los Angeles World Airports has announced a \$5 billion Landside Access Modernization Program for LAX, involving both a consolidated rental car center and an automated people mover linking it to the central terminal area. Both of those projects are now planned as design-build-finance-operate-maintain P3 projects.

Two other airport facility projects might be done as P3 projects. Dallas/Fort Worth International Airport's John Ackerman has said that the proposed sixth terminal (Terminal F) might be done as some form of P3 project.⁹ And the Des Moines Airport Authority has hired KPMG to assist in evaluating alternatives for developing a replacement for its 67-year-old terminal, one of which is a P3 procurement.

P3 Airports Outside the Pilot Program

The proposed third Chicago airport at Peotone, 40 miles south of the Loop, has evolved into a public-private partnership in which the state DOT would own the land and be responsible for the airside (runways, taxiways, control tower) while the private sector would finance, develop and operate the landside (terminal, parking, etc.). In 2013 the Illinois Legislature enacted a bill, SB 20, formally authorizing a 75-year design-build-finance-operate-maintain concession for the airport. In June 2014, IDOT purchased 288-acre Bult Field, a general aviation airport adjacent to the land the agency has been acquiring for the airport. In September 2014 IDOT held an "industry day" to test private sector interest in the project; about 150 people attended. And in spring 2015 the FAA released its finding that if the planned airport is built, it would have "minimal impact" on traffic patterns of O'Hare and Midway Airports.

Gary, Indiana's airport several years ago was renamed Gary/Chicago Airport. Having lost its only airline, Allegiant, in 2013, city officials embarked on a P3 approach in the hope that professional airport-development and management could transform the airport. In February 2014 the Gary Airport Authority finalized a deal with Aviation Facilities Company (AFCO) as its preferred developer. Under a 40-year contract AFCO will invest \$100 million in the airport. The company's subsidiary, AvPorts, has a 10-year contract to manage the airport, with six possible five-year renewals. So far, the agreement has not led to any new scheduled airline service.

Propeller Investments, whose privatization proposal for Briscoe Field in the Atlanta metro area was defeated in 2012 by NIMBY opposition, returned to the area in 2013 with a new proposal: to develop passenger service at the relatively new Paulding Northwest Atlanta Airport. The deal is structured as a P3 between Propeller and the county, which does not require a pilot program slot—only airfield and airspace approval from the FAA, as well TSA screening facilities. Both Delta Airlines and Atlanta Mayor Kasim Reed have come out strongly against the plan, vowing to protect Atlanta Hartsfield-Jackson Airport from competition. The FAA in November 2014 found that commercial service at Paulding would not conflict with the airport's obligations under federal grants. The next step, an Environmental Assessment, was released by the FAA in October 2015, with a finding of no significant impact. Allegiant Airlines has expressed interest in serving the airport.

Propeller Investments is pursuing a similar opportunity at Paine Field in Everett, a suburb north of Seattle. Airport officials want to attract airline service to provide an alternative to the metro area's sole commercial airport, SeaTac. Both Alaska and Allegiant have expressed interest in providing such service. A three-year FAA study released in 2012 found that adding airline service would have no significant adverse impact on the surrounding area, but there is significant NIMBY opposition. If the project goes ahead, Propeller would use its own funds to build and operate a commercial terminal, as well as paying rent to airport owner Snohomish County. Paine Field has a 9,100 ft. main runway, consistent with its serving an adjacent Boeing large-airliner assembly plant. In March 2015, the Snohomish City Council approved the agreement between the airport and Propeller, under which (once permits are in hand) the company would build and operate the passenger terminal for 30 years. In September 2015, the *Seattle Times* editorialized in support of the plan.

One other non-Pilot Program P3 took effect in April 2015, when NASA implemented a \$1.1 billion, 60-year lease on historic Moffett Field in Silicon Valley. The lessee is Google, which has agreed to restore three huge airship hangars, which it will use for testing unmanned aerial vehicles (UAVs), high-altitude balloons, and various experimental craft. To operate the two-runway airport itself, Google has hired AvPorts.

In December, an innovative privately developed airport terminal opened in San Diego County, just across the border from the Tijuana International Airport. The \$120 million Cross Border Xpress provides an easier way for U.S. air travelers to reach that airport, checking in on the U.S. side and paying a \$12 toll to walk across a bridge to the airport. The company has paid for U.S. customs and immigration facilities on the U.S. side. The property includes land on which the company has approval for a 340-room hotel, shopping center, rental car facility and gas station.

Finally, privately developed Branson Airport, in Branson, MO, has fallen on hard times, after losing its only scheduled airlines in 2014. During 2015 it subsisted on public charter flights, with passenger enplanements down more than 70% from the previous year. The company's stand-still agreement with bondholders was extended to June 2016, since the airport does not have enough revenue to make debt service payments on \$114 million in bonds issued to finance its construction.

B. U.S. Airport Security

The private sector is involved in two aspects of airport security: marketing the Transportation Security Administration's PreCheck trusted traveler program, and operating passenger and baggage screening under TSA's Screening Partnership Program.

1. PreCheck Program Marketing

At the start of 2014, TSA announced that PreCheck lanes had been installed at 114 U.S. airports and said that it had met its previously announced goal of having 25% of daily airport passengers going through those expedited lanes, rather than the regular screening lanes. That total included PreCheck members selected by airlines from their premium frequent-flyer members, holders of Global Entry or other trusted traveler cards issued by sister agency Customs & Border Protection, members of the military, and many people selected on the spot from the regular screening lines by TSA Behavior Detection Officers and moved into the PreCheck lane(s); that process was called “Managed Inclusion.”

TSA also implemented a contract with Morpho Detection to set up and operate PreCheck application points, some at airports and many at other locations where Customs & Border Protection had screening operations (such as seaports). While Morpho’s application points focused on recruiting individuals, who are fingerprinted and pay \$85 for a five-year membership fee, TSA also held discussions with data/security companies interested in recruiting PreCheck members on a “wholesale” basis, via marketing to companies, trade associations, etc. That could expand PreCheck membership considerably, enabling the agency to drop its increasingly criticized Managed Inclusion efforts (whose primary purpose is to get more people into the PreCheck lanes to justify their existence).

The latter effort, called Third Party Pre-Screening, made no progress in 2014, despite the fact that three companies that were pre-qualified in 2013 had developed algorithms for pre-screening large numbers of people, in accordance with standards provided by TSA. Live prototype testing was supposed to have taken place in spring 2014, but a cryptic March 7th announcement from TSA put the program on hold, primarily due to expressed concerns from privacy organizations. Eventually, at an Industry Day in Washington, D.C. in October 2014, TSA released a new schedule and set of steps that companies had to go through: a new round of proposals, TSA assessment of their pre-screening algorithms, and then TSA end-to-end testing of their infrastructure and enrollment methods. The process for selecting companies would be a Request for Proposals issued in late November, proposals due by late December, and contract awards in early February 2015.

Unfortunately, the RFP was withdrawn without explanation in February, and the future of the program was once again called into question. Under its new administrator, TSA was once again reviewing the privacy questions. That process took until October, when the agency issued yet another RFP, this time with further restrictions on the types of data companies can use in their vetting algorithms, plus a requirement for all applicants to be fingerprinted as part of the process. That would prevent use of a fully on-line application process, since people would have to show up in person to be fingerprinted. Several companies believe their algorithms can meet TSA standards without the use of fingerprints, and if that is correct, the potential recruitment would be substantially larger than if all applicants had to appear in person to be fingerprinted. It would also significantly increase the companies’ costs. It remains to be seen how the companies will respond, and whether TSA will accept proposals that do not require fingerprints.

In late summer, the new TSA administrator, Peter Neffenger, announced the end of Managed Inclusion, but cautioned that without those large numbers of people using PreCheck lanes, the hours of operation of the lanes might be cut back—until or unless expanded PreCheck recruitment gets approved and implemented.

2. Outsourced Airport Screening

During 2014, the several-year hiatus in TSA approving new entrants to its program for outsourced screening at airports desiring to do this finally ended. In October 2014, TSA screeners departed from Orlando Sanford Airport and were replaced by screeners from a TSA-certified security company, Trinity Technology Group, with a six-year contract, under TSA's Screening Partnership Program (SPP). Sarasota-Bradenton, Florida was also approved for SPP screening, and its contract (also with Trinity) went into operation in February 2015. Officials at Orlando International Airport (MCO) decided not to outsource their screening, after more than a year of study. As of late 2015, there were 21 airports in SPP.

In November the GAO issued the latest in its series of reports on how TSA compares the cost of outsourced and in-house passenger and baggage screening: "Screening Partnership Program: TSA Can Benefit from Improved Cost Estimates," GAO-16-19. Despite GAO's previous critiques, TSA persists in providing incomplete cost comparisons. It compares the full cost of contract screening with only the cost items that show up in TSA's budget. That fails to reflect the total cost to the federal government of TSA screening, since TSA benefits (e.g., retirement benefits and insurance) are not included in the cost comparisons. Because of this, TSA's reported costs of screening include only 91% of the full cost to the government. GAO also found that the agency does not report its cost comparisons to Congress, using them only internally.

Leaked findings from Inspector General "Red Team" testing of TSA passenger checkpoints led to major media and congressional critiques in June. I.G. testers were able to get prohibited items through checkpoints on 67 out of 70 tests. One consequence was the dismissal of the TSA's acting administrator and harsh statements by members of Congress in the subsequent hearings. But this legacy of failures only underscores TSA's built-in conflict of interest: it is both the regulator of aviation security and the operator of a major portion of it (passenger and baggage screening). The remedy ought to be removing the screening function from the security regulator (TSA) and devolving it to individual airports, at arm's length from TSA. But so far, there has been no serious effort in Congress to even discuss that solution.

3. Airport Employee Screening

After several well-publicized instances of airport employees being involved in shipping contraband on commercial planes, the question arose about whether all such employees should be screened each time they enter secure areas of airports. As of the start of 2015, two major U.S. airports where such incidents had

occurred—Miami and Orlando—had implemented 100% employee screening. The others relied on the required FBI background checks at the time of hiring plus random screening. An article on the subject in *The Wall Street Journal* cited a contractor study for the TSA last decade estimating that 100% screening at all TSA-served airports would cost between \$5.7 billion and \$14.9 billion per year.¹⁰ With that as background, an industry working group advising the TSA concluded that 100% employee screening would not be cost-effective, but recommended 28 other measures in five categories, such as perpetual vetting against criminal background information (rather than only at hiring) and enhanced random screening.

But when Atlanta’s Hartsfield-Jackson International Airport endured two employee-security exposés in the span of four months (December 2014 and March 2015), its officials decided to move to 100% employee screening. But they did not ask TSA to provide it. Instead, like Miami and Orlando, they turned to a private security company. MIA’s employee screening contract costs it \$3.1 million per year, while Orlando’s is \$3.5 million. Atlanta’s new contract, begun in summer 2015, cost \$5.5 million. Doing a rough extrapolation of these figures to all 450 TSA-served airports, This author estimated the annual cost of 100% employee screening by contractors to be about \$135 million—a far cry from the \$6 billion–\$15 billion estimate provided by TSA.¹¹

C. Air Traffic Control

1. Global ATC Trends

In 1987 New Zealand became the first country to “corporatize” its air traffic control system. Since then, more than 50 other countries have followed suit. While the models differ from country to country, nearly all have the following features:

- The ATC system is separated from the transportation agency and reorganized under corporate law.
- Funding is derived directly from the users of the airspace under that country’s jurisdiction via fees and charges for terminal-area, enroute and overflight services. The International Civil Aviation Organization (ICAO) provides guidelines for ATC charging systems.
- In most cases no tax funding is involved, though in some cases governments pay the corporation to provide services in remote areas.
- The revenue stream is bondable to finance large-scale capital projects, similar to the way U.S. airport projects are financed.
- The corporation reports to a board of directors, rather than to a legislative body.
- Safety regulation is provided by a government agency, at arm’s length from the ATC corporation.

These ATC corporations can take several different forms. The most common is a government corporation, in which the national government is generally the sole shareholder (and therefore appoints its board members). In Canada, the corporation (Nav Canada) was chartered as a non-profit, non-share corporation governed by a board consisting of aviation stakeholders—a kind of user co-op. And in the UK, the corporation (NATS) was set up as a public-private partnership in which aviation stakeholders owned 46%, employees 5%, and the government 49%. Subsequently, the airline group sold a large fraction of its shares to a UK pension fund.

The global trade association for what are now called air navigation service providers (ANSPs) is the Civil Air Navigation Services Organization (CANSO). It represents ANSPs in international discussions on aviation policy, just as IATA represents international airlines and ACI represents airports. As of late 2014, CANSO had 87 full members (ANSPs) and 81 associate members (aerospace companies). Over 50 of the full members are self-supporting ATC corporations, including those of Australia, New Zealand, Thailand, India, Canada, the UK, Germany, Italy, Austria, Switzerland, Portugal, Spain and South Africa. Governmental ANSPs include Cyprus, Luxembourg, Greece, the Maldives and the FAA's Air Traffic Organization, which is part of the FAA.

2. U.S. Air Traffic Control

The impact of the federal government sequester in spring 2013—with furloughs of controllers and the near shut-down of 149 smaller control towers—changed the debate about the U.S. ATC system. Among the cutbacks made by the FAA to eliminate the furloughs and keep the small towers in operation were to freeze controller hiring and training for a year, to slow down some ongoing modernization programs, and (as directed by Congress) to reduce spending on airport grants in order to keep controllers working without furloughs. Those impacts fostered serious discussion among aviation stakeholders—beginning in 2013 and continuing through 2014–15—about funding and governance reforms to the ATC system.

Congress requested a report from the Government Accountability Office on the use of ATC corporatization overseas, and two Washington, D.C. organizations—the Business Roundtable and the Eno Center for Transportation—convened working groups to develop and recommend serious reforms. The former group was composed of former federal aviation officials and outside experts, while the latter comprised primarily key aviation stakeholder organizations. Both succeeded in having specific corporatization recommendations ready by the first quarter of 2015, when Congress began to hold hearings on the next FAA reauthorization legislation. At both House and Senate hearings, testimony discussed the idea of converting the FAA's Air Traffic Organization (ATO) into a self-supporting nonprofit corporation, regulated at arm's length for safety by the remaining FAA. Those taking this position included airline CEOs, former FAA officials, the president of the air traffic controllers' union, the head of the Business Roundtable, and several aviation policy experts.

The House Transportation & Infrastructure Committee drafted provisions for such a corporation to be included in the FAA reauthorization bill, which was expected to be released the first week of July. However,

House leadership ruled against releasing it then, since they expected the reauthorization of the highway and transit program to take up all available time on the calendar until close to the end of the calendar year—which proved correct. The bill was introduced early in 2016 and was passed by the House Transportation & Infrastructure Committee in mid-February.

About the Author

Robert Poole is director of transportation policy and the Searle Freedom Trust Transportation Fellow at Reason Foundation, a public policy think tank based in Los Angeles and Washington, D.C.

In aviation security, Poole advised the White House and House Republican leaders on what became the Aviation & Transportation Security Act of 2001, enacted in response to the 9/11 attacks. He has authored a number of Reason policy studies on aviation security and is the author of a paper on risk-based aviation security for the OECD's International Transport Forum.

He was among the first to propose the commercialization of the U.S. air traffic control system, and his work in this field has helped shape proposals for a U.S. ATC corporation. A version of his nonprofit corporation concept was implemented in Canada in 1996. He has advised the Office of the Secretary of Transportation, the White House Office of Policy Development, the National Performance Review, the National Economic Council, and the National Civil Aviation Review Commission on ATC commercialization. He is a member of the Air Traffic Control Association and of the GAO's National Aviation Studies Advisory Panel.

Poole's Reason studies helped launch a national debate on airport privatization in the United States. He advised both the FAA and local officials during the 1989–90 controversy over the proposed privatization of Albany (NY) Airport. His policy research on this issue helped inspire the privatization of Indianapolis airport management under Mayor Steve Goldsmith and Congress' 1996 enactment of the current Airport Privatization Pilot Program.

Poole has testified on airports, aviation security and air traffic control on a number of occasions before House and Senate aviation and homeland security subcommittees, and he has spoken on these subjects before numerous conferences over the past decade. He has also done consulting work on several airport privatization feasibility studies.

Poole also edits monthly Reason Foundation e-newsletters on airport and air traffic control policy issues. He received his B.S. and M.S. in mechanical engineering at MIT and did graduate work in operations research at NYU.

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