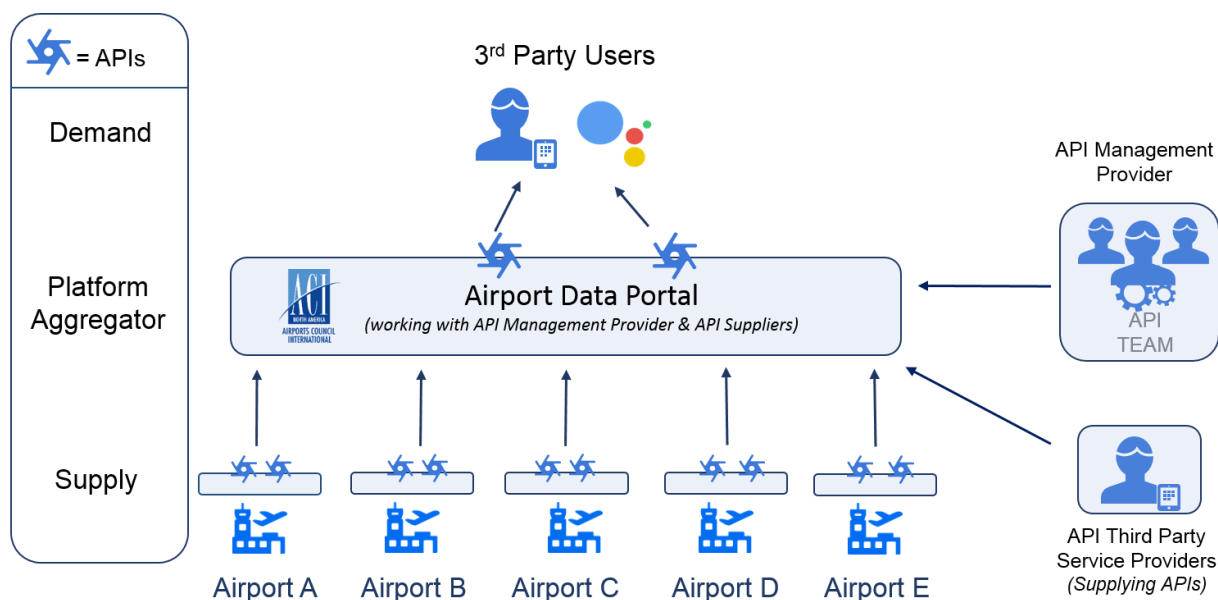


## Airport Data Portal Program

### Overview

The ACI-NA Airport Data Portal Program is a data aggregator that enables third parties (such as airlines, travel apps, etc.) to access data from Member Airports in a standardized format using a single portal. This benefits both passengers and airports. Passengers want access to accurate and real-time information from airports that is often provided via third parties. Airports create more collective value participating in the ACI-NA Airport Data Portal Program.

Application Programming Interfaces (API) facilitate the easy exchange of electronic data between third parties. Airport data can reach passengers through airlines and other apps via airport APIs. For example, users can pre-book their car parking or view security checkpoint wait times on airline apps. APIs are a flexible way of delivering airport services to current and future passengers. APIs enable airports to innovate faster and reach new passenger audiences. The collective value to third parties is enhanced when there are multiple airports participating in the Airport Data Portal Program.



### **Benefits for participating airports will include:**

- Improve passenger experience with airports creating collective value
- Reduce operating and technical costs, as airports don't have to develop their own airport external data portals
- Leverage common sharing and economies of scale operating under one portal
- Allow airports to increase value from their digital assets and opportunities for data commercialization
- Facilitate operational efficiency while operating within the existing legal framework
- Promote data standardization

## **Data Standardization**

The framework of the Airport Data Portal is built on airport data standardization. Interested airlines, technology platform providers or other app developers can subscribe to the Airport Data Portal and access standardized data from one source with the approval of the airport. Likewise, participating airports would benefit from having a single clearinghouse depository for distributing such data, minimizing the need for separate arrangements with each subscriber.

The ACI Aviation Community Recommended Information Services (ACRIS) sets the standard for information and data exchange in the aviation community, helping airports meet the demands of the present and the future. ACRIS defines a framework for airports, airlines, partners, and suppliers to share data across different companies and providers. The definition and implementation of standardized business processes and interoperable IT solutions is a vital issue for the global aviation industry.

## **Airport Terms and Conditions**

ACI-NA has developed and controls the Airport Programming Interface Data Portal (the “**ACI-NA Airport Data Portal**”) that enables Member Airports to share their data (the “**API Airport Facility Data**”) via a predefined Application Programming Interface (“**API**”) on the ACI-NA Airport Data Portal for use in Third Party Apps. Each interested airline, technology platform or other app developers (each a “**Subscriber**”) to the API Airport Facility Data of participating Member Airports could access standardized data from one source.

Each participating airport in the Airport Data Portal Program must accept the ACI-NA Airport Data Portal License Terms and Conditions (available from ACI-NA), which provides Member Airports the capability to store specific API Airport Facility Data endpoints and descriptive information in the ACI-NA Airport Data Portal.

An agreement is required between ACI-NA and individual airport operators to participate in the Airport Data Portal Program. If airports have an overarching agreement with ACI-NA, airport APIs (Open and Private) can be exposed to third parties in the data portal with the approval of airport operators. In essence, the license agreement between airports and ACI-NA provides reassurances to both parties. The topics covered in the airport terms and conditions include a variety of legal clauses.

Participating airports will grant ACI-NA a worldwide, non-exclusive, revocable, non-transferable, fee-bearing license to use and reproduce use of the API Airport Facility Data solely for the purpose of providing the same, in a standardized format to Subscribers through the ACI-NA Airport Data Portal. ACI-NA acknowledges that the Licensed Data is the sole and exclusive property of the Airport, and that the Terms and Conditions does not confer any transfer of title to, or ownership of, the Licensed Data to ACI-NA or any other third party, whether through the use of the Licensed Data or otherwise.

## **Subscribe Terms and Conditions**

Participating third parties “Subscribers” (such as airlines, travel apps, etc.) will be able to access and consume the API with the agreement of the publishing airport and by registering online and accepting the ACI-NA Subscriber Terms and Conditions.

## **Airport Data Portal Components**

ACI-NA has developed and controls the Airport Programming Interface Data Portal (the “**ACI-NA Airport Data Portal**”) that enables Member Airports to share their data (“**API Airport Facility Data**”) via a predefined Application Programming Interface (“**API**”) on the ACI-NA Airport Data Portal for use in Third Party Apps.

The ACI-NA Airport Data Portal has four Components:

### **Component 1**

Description: Repository for the Airports Council International (ACI World) Aviation Community Recommended Information Services (ACRIS) documentation standards, specifications, set forth by the ACI World ACRIS Working Group. The repository contains all definition documents of API data standards currently approved and used by the Community.

Availability: The Airport Facility Data in Component 1 will be made available to the general public.

Fees: No Fee required.

Annex: No Annex required.

### **Component 2**

Description: Allows access to the ACI-NA Airport Data Portal Developer Sandbox and the Collaboration Software Platform.

Sandbox: The Developer Sandbox is a test environment. When using the ACI-NA Airport Data Portal, any API Airport Facility Data calls in the Developer Sandbox are simulations only. The Developer Sandbox and the data contained in the Developer Sandbox may only be used for testing purposes related to developing API Airport Facility Data and none of the participating Member Airports or Subscribers are permitted to use the Developer Sandbox, or the data contained therein, for any other purpose.

Collaboration Platform: The Collaboration Software Platform (Confluence – Atlassian) creates a community of Member Airports that can draw value from each other and efficiently share industry API Airport Facility Data standards and specifications. Currently, all pilot airports have access to the platform and hold frequent conference calls in order to collaborate in the development of the Program under Component 2.

Availability: The data and tools in Component 2 will be available to Member Airports and Subscribers.

Fees: Component 2 included as part of the membership in the ACI-NA Data Portal Program.

Annex: No Annex Required.

### **Component 3**

Description: Component 3 provides Member Airports with the capability to publish API Airport Facility Data endpoints and descriptive information pertaining to such API Airport Facility Data in the ACI-NA Airport Data Portal, with the approval of ACI-NA. This feature of the ACI-NA Airport Data Portal is typically used for the bilateral sharing of data between an airport and one or more Subscribers. The published data is specific to one airport and a standard created by that airport. The data is not typically provided by more than one airport and the data standard is not necessarily an ACRIS data standard.

Availability: Subscribers will be able to access and consume the API with the agreement of the publishing airport and by registering online and accepting the ACI-NA terms and conditions.

Fees: Separate fees for access to the API Airport Facility Data in Component 3 by Subscribers shall be in the amounts agreed upon by the participating Member Airport. The participating Member Airport may elect, in its sole discretion, to make such API Airport Facility Data available to Subscribers under Component 3 at no charge, as set forth in the executed Annex.

Annex: An Annex for each category of API Airport Facility Data shared by a participating Member Airport must be agreed upon and executed by ACI-NA and the participating Member Airports to use Component 3.

### **Component 4**

Description: The API Airport Facility Data in Component 4 is intended for use by multiple airports desiring to publish data to an ACRIS-agreed standard.

Availability: Limited to participating Member Airports. Subscribers will be required to execute a commercial agreement with ACI-NA.

Fees: The API Commercial Group, a working sub-group of the Airport Data Portal Advisory Group, will determine the rates to be charged to Subscribers and the Revenue Share to be paid to participating Member Airports, as set forth in each Annex.

Annex: An Annex for each category of API Airport Facility Data shared by a participating Member Airport must be agreed upon and executed by ACI-NA and Member Airport to use Component 4.

## **ACI-NA Airport Data Portal Program Fee**

The ACI-NA Airport Data Portal Program is made available to participating Member Airports for an additional optional fee as part of the airport membership agreement with ACI-NA. Member Airports will have full access to all components of the ACI-NA Airport Data Portal, developer sandbox, collaboration platform, and will have the ability to store API Airport Facility Data endpoints in the ACI-NA Airport Data Portal. As set forth above, each different type of API Airport Facility Data (i.e. Airport Mapping Data, Security Wait Time Data) shared by the participating Member Airport in Components 3 and 4 will be covered by a separate Annex to the ACI-NA Airport Data Portal Program Terms and Conditions, which will set forth the fees and/or revenue shares with Member Airports.

The ACI-NA Airport Data Portal Program fees charged to participating Member Airports are based on historic traffic volumes at the participating Member's Airport. Passenger volumes have been converted based on the airport CY FAA enplanements that determine airport hub sizes. The category of international airports will be determined on CY passenger volumes (large, medium, and small).

| <b>Airport</b>        | <b>Passenger Volumes (CY)</b>   | <b>Annual Program Fee</b> |
|-----------------------|---|---------------------------|
| <b>Large Airport</b>  | Greater than 19 million passengers                                      | <i>Contact ACI-NA</i>     |
| <b>Medium Airport</b> | Greater than 4.5 million passengers but less than 19 million passengers | <i>Contact ACI-NA</i>     |
| <b>Small Airport</b>  | Less than 4.5 million passengers  | <i>Contact ACI-NA</i>     |

The annual program fee paid to ACI-NA by Member Airports will be used to maintain and continue the development of the ACI-NA Airport Data Portal. This includes the ACI-NA Airport Data Portal operating costs, developer expenses, support expenses, and other expenses solely related to the ACI-NA Airport Data Portal. Professional services to Member Airports like consulting are outside the scope of the annual program fee and can be purchased from ACI-NA on a time and materials basis at market rates.

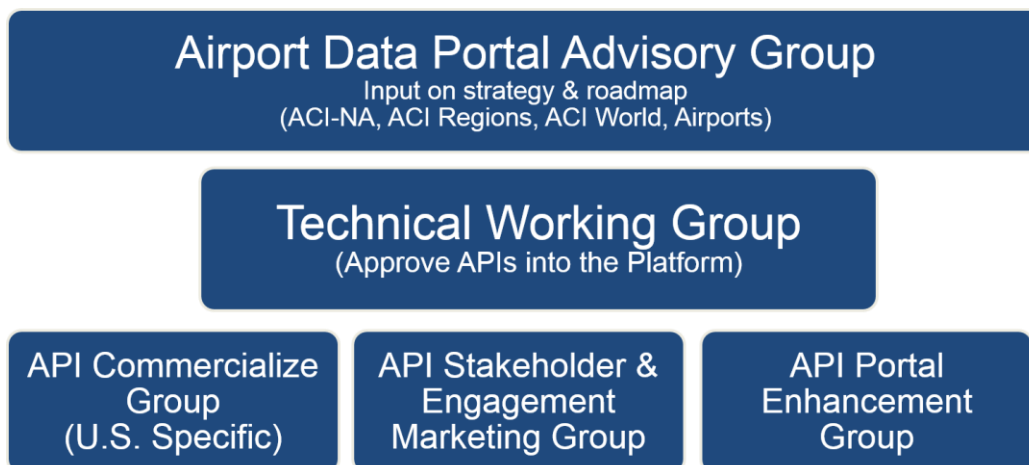
A trial version is not available as Member Airports need to accept the ACI-NA Airport Data Portal terms and conditions for access and utilization. Airports can visit the ACI-NA Airport Data Portal prototype website to view API Airport Facility Data that has been developed during the pilot with various ACI-NA airport members. [<https://amer-partner6-aci.apigee.io/>]

## **Management Overview**

ACI-NA and Member Airports will form an ACI-NA Airport Data Portal Advisory Group. This group will provide input on the strategy from Member Airports. ACI-NA will be responsible for the development schedule (roadmap) with input from the Advisory Group.

ACI-NA will provide technical and marketing support to promote the ACI-NA Airport Data Portal.

Member Airports may assign one individual to each of the groups. The ACI-NA Airport Data Portal management overview is summarized below:



ACI-NA will be responsible for the following:

- Manage the technical delivery of the ACI-NA Airport Data Portal
- Operate the ACI-NA Airport Data Portal and provide support to airports
- Test the integration of the ACI-NA Airport Data Portal with the authentication airport APIs (i.e. routing to the right airport endpoints)
- Provide API usage reports to airports
- Provide airport-specific configuration data
- Allow only authorized applications to access the ACI-NA Airport Data Portal
- Build and maintain clear documentation for third parties. This information will be provided by the ACRIS Working Group
- Provide assistance to airports for recruiting third parties when requested to do so by airports.

## **Use Case: Security Checkpoint Wait Time API**

### **Background**

Airports have started installing wait time technology solutions using third-party providers. There are multiple wait time solution providers in the marketplace that use different technology equipment and specifications. The Transportation Security Administration (TSA) Modernization Act of 2018 directs the TSA Administrator to publish real-time airport security checkpoint wait times online and at physical locations. This is a TSA requirement and the agency expects to release their plan later this year.

There is a need to create an industry data standard and maintain a level of consistency in the data quality. Airports Council International-North America (ACI-NA) has developed an Application Programming Interface (API) data specification and online portal for the exchange of standardized security checkpoint wait times. The portal is vendor-agnostic and will allow for multiple vendors and airports to customize data for each airport's use while maintaining standardization of the data.

### **Wait Time API Specification**

The Wait Time API Specification has been developed by airports and with input from wait time technology solution providers. The specification is augmented from the ACI data exchange standards, the Airport Community Recommended Information Services (ACRIS) Semantic Model.

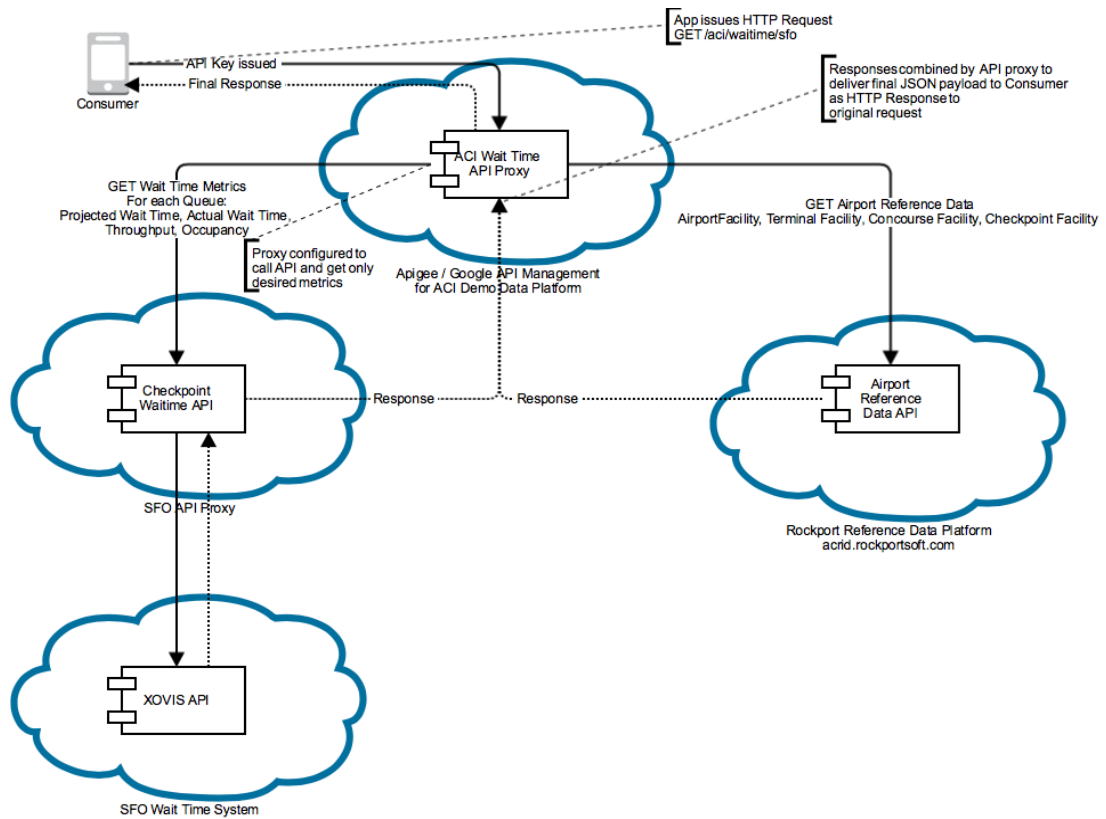
Pilot airports provided security checkpoint layouts, topology, and reference data to validate the data quality. The specification will further evolve as more input from stakeholders is provided and government requirements are included or modified. ACI plans to issue periodic updates to the specification to reflect the needs of passengers, federal governments and aviation industry stakeholders.

The API specification includes the geospatial context of the airport's security checkpoints including the terminal building and concourse where the checkpoint is located. Latitude and longitude coordinates provide a precise location that can be used in maps and user interface displays.

For each checkpoint, the API specification provides the metrics for each individual queue:

1. Queue Wait Time: This is the duration that a passenger exiting the queue has experienced. The unit of measurement is seconds. The amount represents the average number of seconds experienced by passengers exiting the queue in the last five minutes. The amounts are required to be updated every five minutes.
2. Queue Projected Wait Time: This is the estimated time that a passenger entering the queue can expect to wait. The unit of measurement is seconds. Estimates are required to be updated every five minutes.
3. Queue Throughput: The average number of passengers processed over the past hour. The unit of measurement is passengers per hour. This metric is updated every five minutes.
4. Queue Occupancy: The count of passengers in the queue. The unit of measurement is number of passengers. This metric is updated every five minutes.

## Integration with the ACI-NA Portal



## ACI-NA Wait Time API Portal Interface

The screenshot shows the **ACI Checkpoints API** portal interface. The main content area displays the endpoint **GET /airports/{Airport ICAO Code}/checkpoints**.

**HTTP request:**  
`https://amer-partner6-prod.apigee.net/aci/airports/{Airport ICAO Code}/checkpoints`

**Path Parameters:**

|                              |        |                               |
|------------------------------|--------|-------------------------------|
| Airport ICAO Code (required) | string | Four-letter Airport ICAO Code |
|------------------------------|--------|-------------------------------|

**Query Parameters:**

|      |                 |      |
|------|-----------------|------|
| page | integer (int32) | page |
| size | integer (int32) | size |

**Response Types:**  
200: OK

**Try this API:**

Request parameters:

- Airport ICAO Code: string
- page: integer
- size: integer

EXECUTE

Airport Data Portal: <https://amer-partner6-aci.apigee.io/>