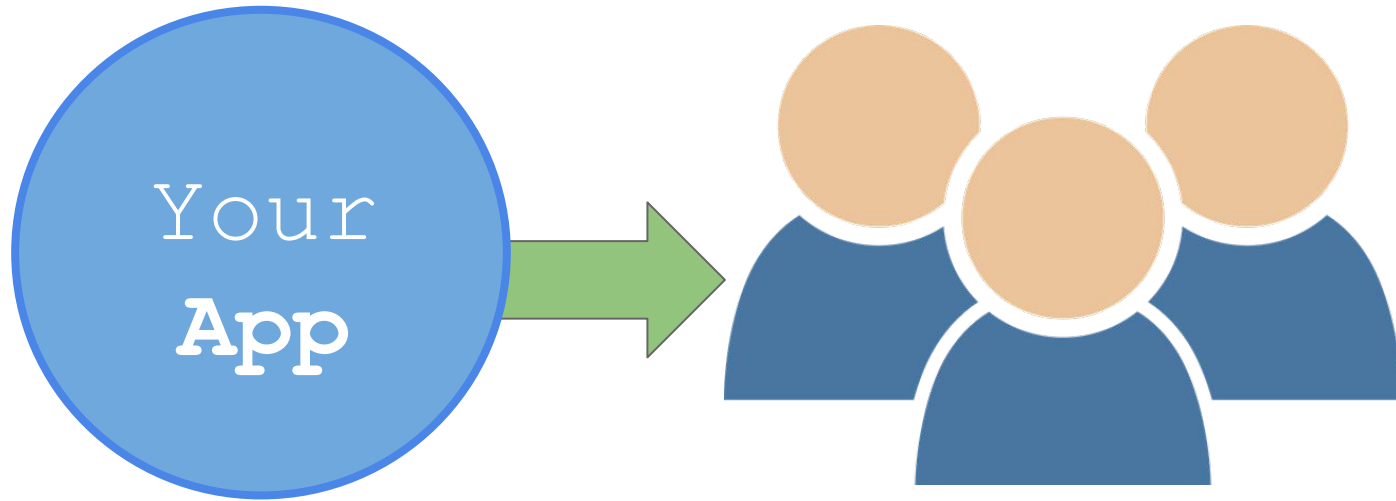


Application Programming Interfaces (APIs) & GSA

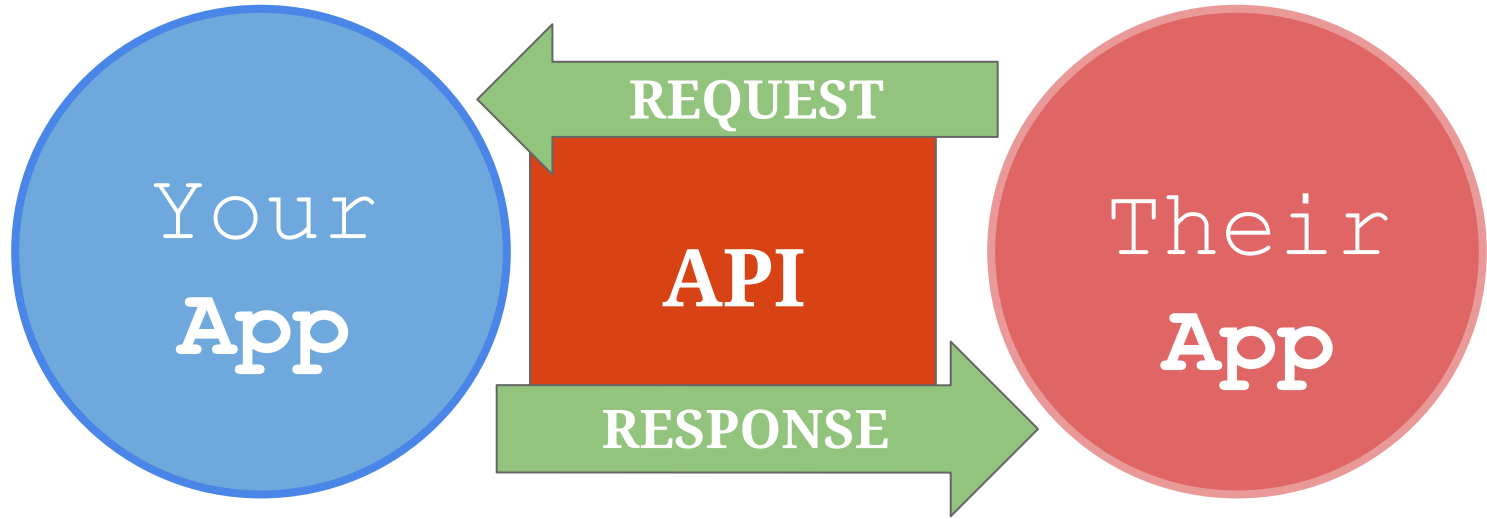
Ryan Day (IC) & Joe Castle (IG)

7/20/17

Users Directly Accessing Your App



API = Application Programming Interface



For this presentation, we're talking about Web APIs

(web)
API

Web APIs Generally:

- Use HTTP to communicate
- Have a web-accessible address
- Use a request and response
- Typically transfer data in XML or JSON formats

An API is like a wall socket

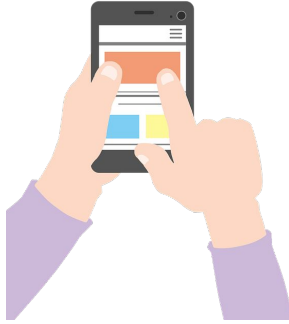


Creative Commons Thatonewikiguy

An API can serve multiple consumers



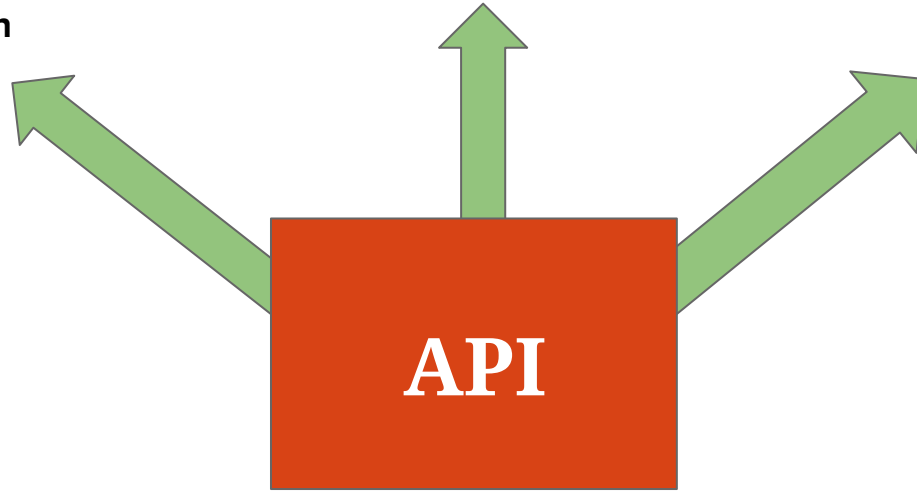
Your Web Site or Application



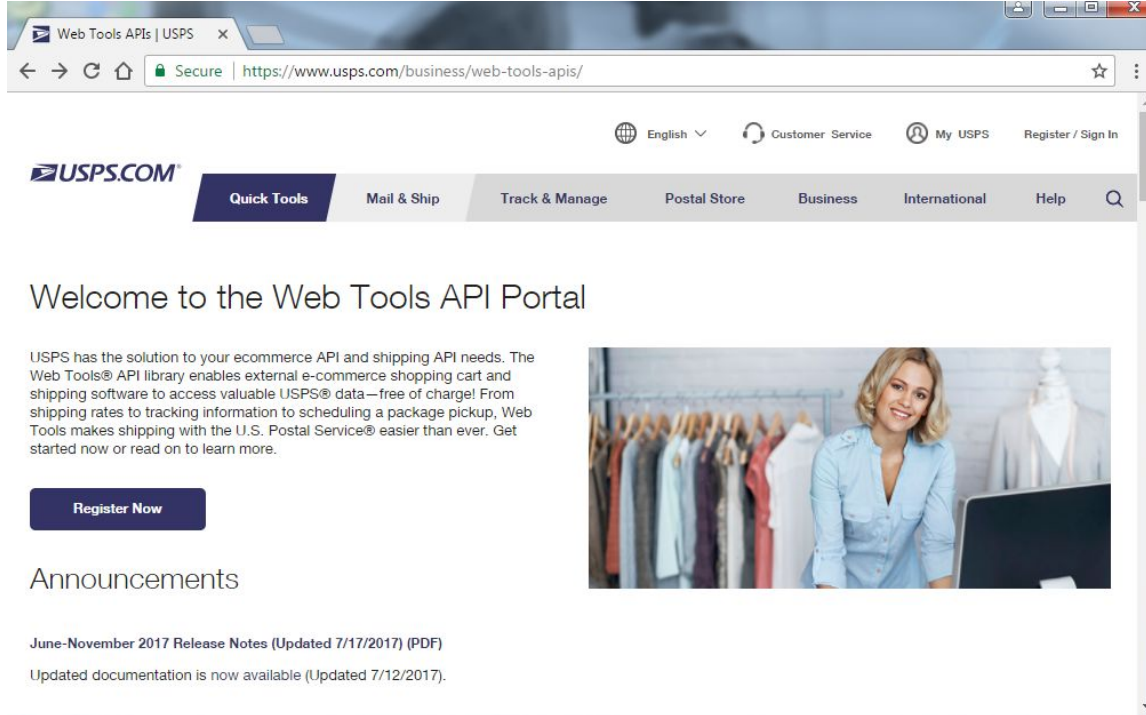
Mobile Application



External web sites or applications



What other Government APIs are out there?



The screenshot shows a web browser window with the URL <https://www.usps.com/business/web-tools-apis/>. The page features the USPS logo and a navigation menu with options like 'Quick Tools', 'Mail & Ship', 'Track & Manage', 'Postal Store', 'Business', 'International', and 'Help'. The main content area includes a welcome message, a paragraph describing the API's capabilities, a 'Register Now' button, and an 'Announcements' section with links to release notes and updated documentation.

Welcome to the Web Tools API Portal

USPS has the solution to your ecommerce API and shipping API needs. The Web Tools® API library enables external e-commerce shopping cart and shipping software to access valuable USPS® data—free of charge! From shipping rates to tracking information to scheduling a package pickup, Web Tools makes shipping with the U.S. Postal Service® easier than ever. Get started now or read on to learn more.

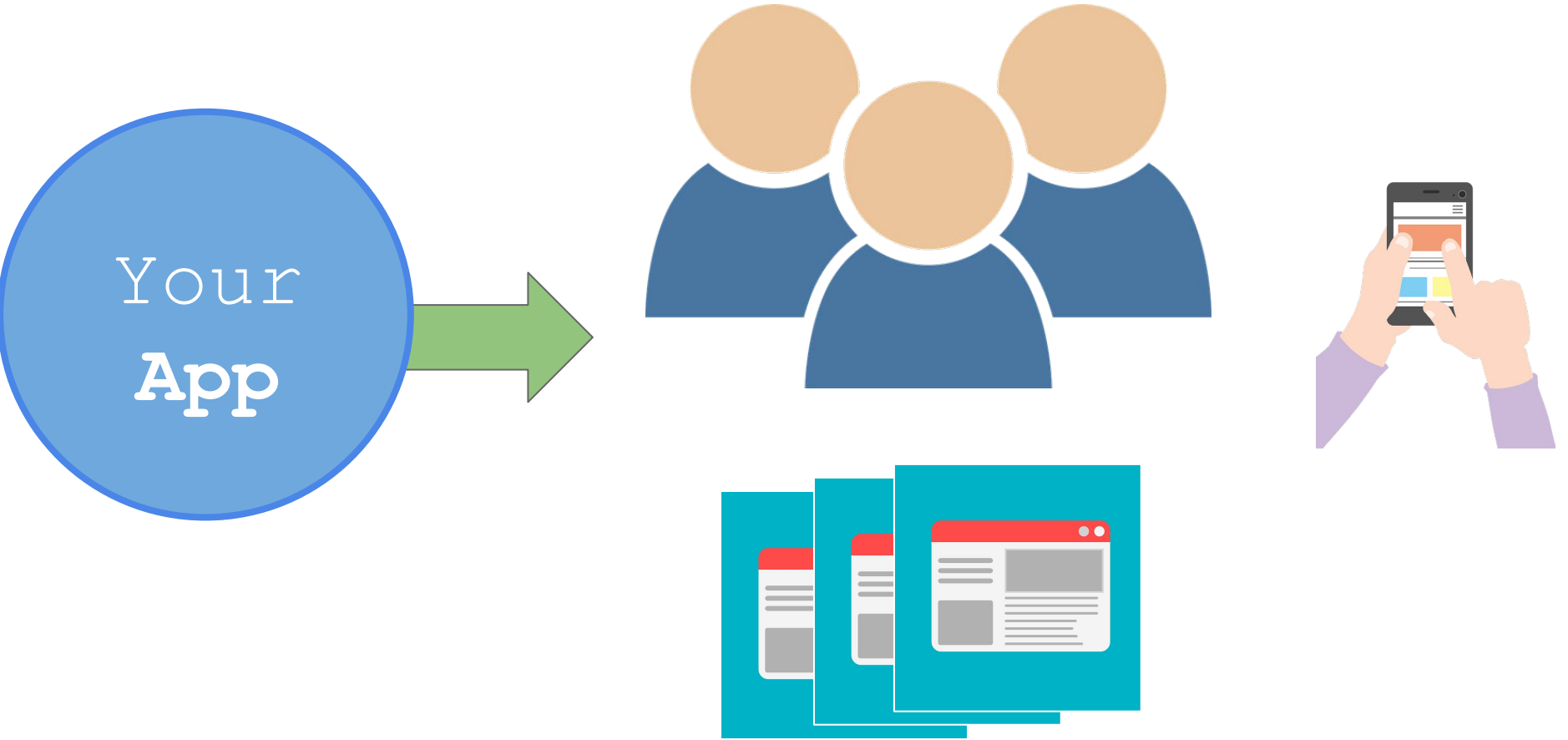
[Register Now](#)

Announcements

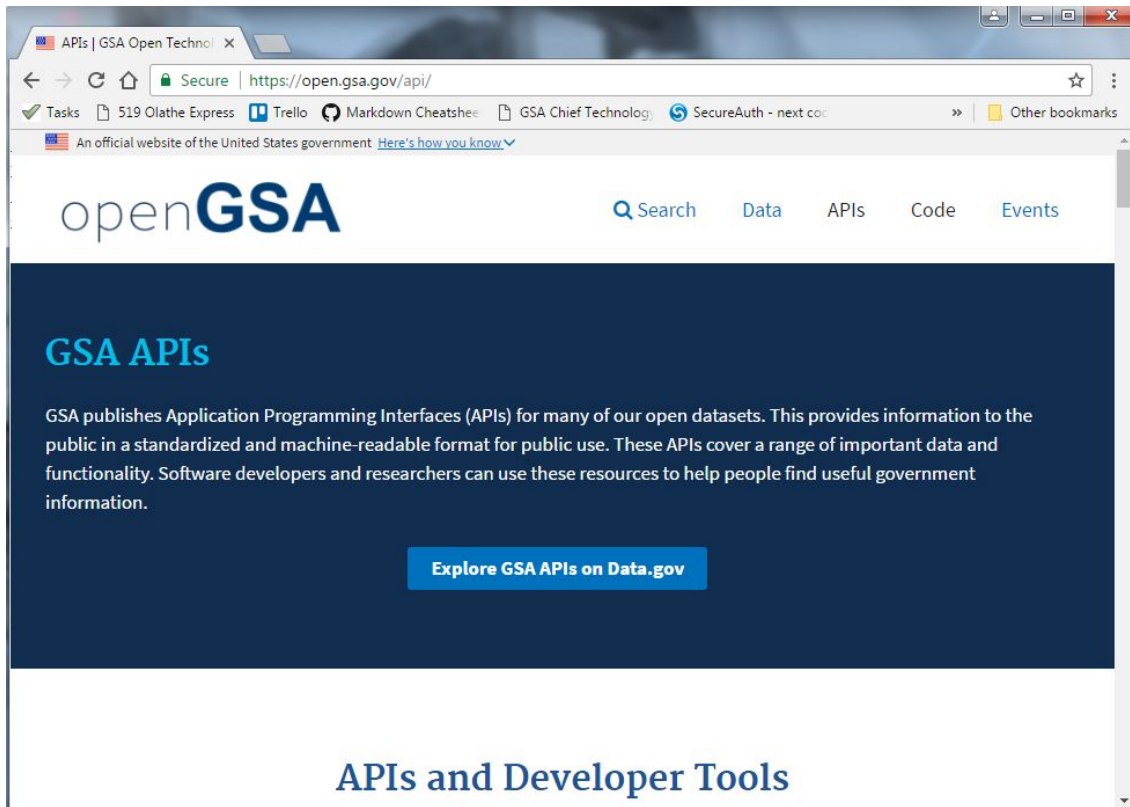
[June-November 2017 Release Notes \(Updated 7/17/2017\) \(PDF\)](#)
Updated documentation is now available (Updated 7/12/2017).

- Package tracking
- Postage price calculator
- Package pickup scheduling
- Address validation

Why create an API?



What GSA APIs are out there?



The screenshot shows a web browser window with the URL <https://open.gsa.gov/api/>. The page features the 'openGSA' logo and navigation links for Search, Data, APIs, Code, and Events. The main content area is dark blue and contains the heading 'GSA APIs' followed by a paragraph explaining that GSA publishes APIs for its open datasets. A blue button labeled 'Explore GSA APIs on Data.gov' is positioned below the text. At the bottom of the page, the text 'APIs and Developer Tools' is visible.

GSA APIs

GSA publishes Application Programming Interfaces (APIs) for many of our open datasets. This provides information to the public in a standardized and machine-readable format for public use. These APIs cover a range of important data and functionality. Software developers and researchers can use these resources to help people find useful government information.

[Explore GSA APIs on Data.gov](#)

APIs and Developer Tools

<https://open.gsa.gov/api>

What other APIs are out there?

Search “API directory”

The screenshot shows the RapidAPI website homepage. At the top, there's a navigation bar with links for Marketplace, About, Docs, Blog, and Login/Sign-up. Below this is a large blue banner with the text "Find and Connect to the World's Top APIs. See How" and a search bar. On the left side, there are "Categories" listed: Translation, Music, Visual Recognition, Mapping, and Social. In the center, there's a "Most Used APIs" section featuring "Yoda Speak" with a "494K" rating and a "Healthy" tag. At the bottom, there's a "Random Famous Quotes" section.

The screenshot shows the ProgrammableWeb website search results. The header includes "ProgrammableWeb" and navigation links for "API NEWS" and "API DIRECTORY". Below the header, there are several tabs: "LEARN ABOUT APIS", "WHAT IS AN API?", "API RESEARCH", "WEATHER", and "MAPPING". The main content area features a search bar with the text "Search Over 17,784 APIs" and a "SEARCH APIS" button. Below the search bar, there are filter options: "Filter APIs" with a dropdown menu set to "By Category" and a checkbox for "Include Deprecated APIs". A table of search results is displayed below the filters.

API Name	Description	Category	Submitted
Google Maps	The Google Maps API allow for the embedding of Google Maps onto web pages of outside developers. using a simple	Mapping	12.05.2005

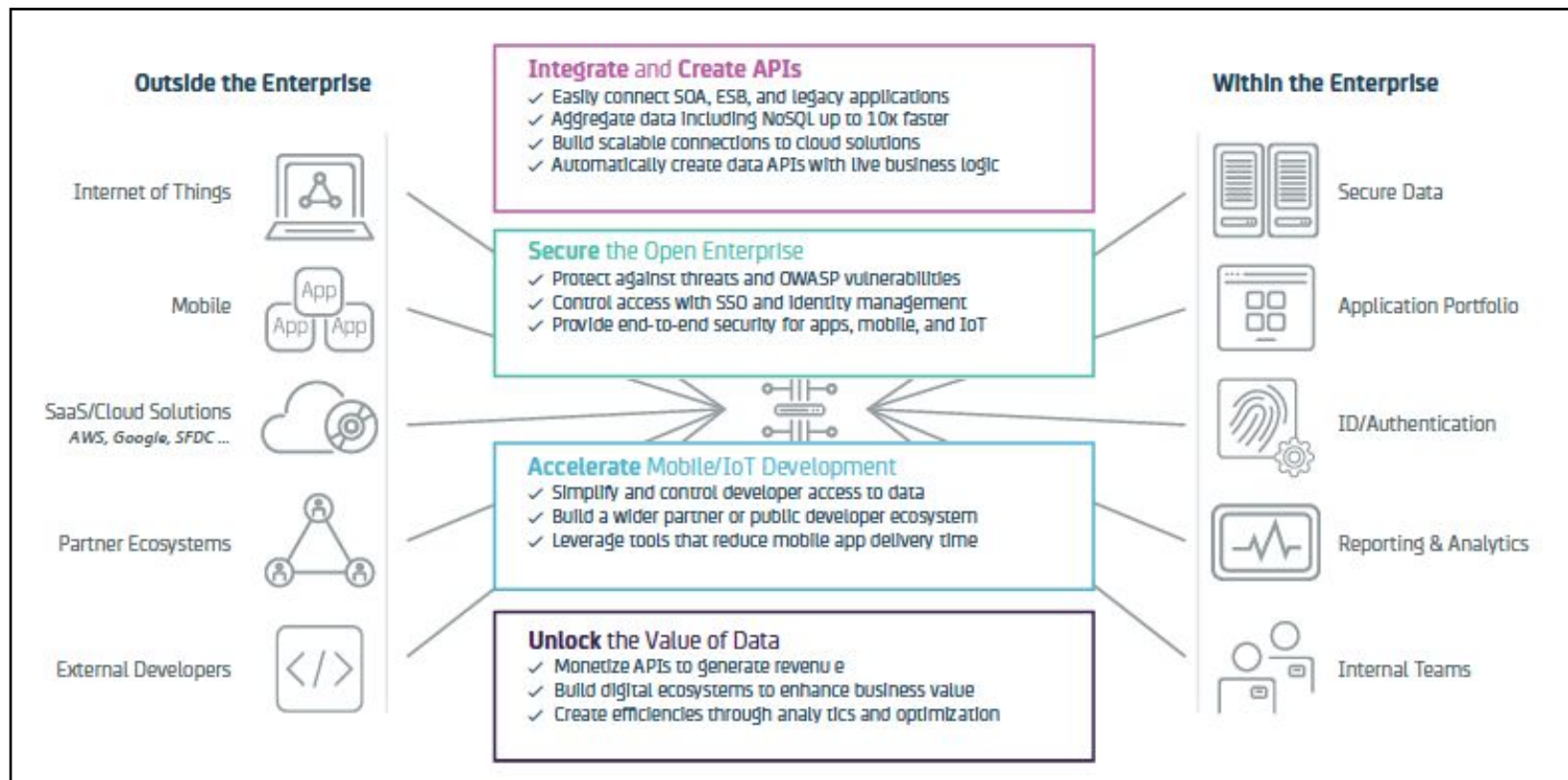
The screenshot shows the apis.guru website search results. The header includes "Browse APIs" and navigation links for "Home", "Directory", "Browse APIs", "Blog", and "Our API". Below the header, there's a search bar and a "Search ..." input field. The main content area features a section titled "APIs in Collection:" with a search bar. Below this, there are three API cards displayed in a grid:

- Authniqu**: No description. OpenAPI/Swagger 2.0. 6 json yaml
- Amadeus Travel Innovatio...**: No description. OpenAPI/Swagger 2.0. 12 json yaml
- AWS Certificate Manager**: powered by amazon web services. AWS Certificate Manager. Welcome to the AWS. OpenAPI/Swagger 2.0. 2015-12-08 json yaml

API Strategy (w/ examples)

- [GSA API Strategy](#) developed and presented to leadership in March 2016
 - Objectives
 - Specifications
 - Recommendations
- Best place to start - <https://open.gsa.gov/api/>
 - [Standards](#), [Feedback](#)
 - [City Pair Program](#) and [prototype](#)

API Interactions - External and Internal



Follow-up

- Explore the documentation provided in this Tech Talk
 - Slides posted online at tech.gsa.gov/techtalks
 - Reach out to Ryan and Joe with questions
 - Consider creating your own APIs

- Join our quarterly API Workgroup
 - Features APIs currently being developed at GSA
 - Features industry and government guest speakers