

# Representing Government Services with JSON-LD (Draft)

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## Overview

The [civic services schema.org proposal](#) is a proposed standard for representing government services targeted to individuals and businesses. Schema.org is a set of schema standards that web masters use to provide machine readable information about data in a HTML document. However, schema.org is not limited to HTML, and other representation formats exist. One of these, [JSON for Linking Data](#), is a lightweight representation of schema.org entities, that is valid JSON with a minimal amount of schema specific data.

This document walks through representing a few government services using the schema.org schema, encoded with JSON-LD.

For more information about schema.org see their [Getting Started guide](#).

Warning	The CivicService schema.org schema is in the proposal stage and subject to change prior to standardization.
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## Examples

### New York State Supplemental Nutrition Assistance Program

Below is an example of representing New York State's Supplemental Nutrition Assistance Program (SNAP) using a schema.org `GovernmentService`, encoded with JSON-LD.

```

{
  "@context": "http://schema.org/",
  "@type": "GovernmentService",
  "@id": "http://otda.ny.gov/programs/food-stamps/",
  "name": "Supplemental Nutrition Assistance Program",
  "alternateName": "SNAP",
  "alternateName": "Food Stamp Program",
  "audience": {
    "@type": "CivicAudience",
    "audienceType": ["Low-Income"]
  },
  "description": "The New York State Food Stamp (FS) Program, known federally as the Supplemental Nutrition Assistance Program (SNAP), issues monthly electronic benefits that can be used like cash at authorized retail food stores. ",
  "provider": {
    "@type": "GovernmentOrganization",
    "name": "Office of Temporary and Disability Assistance",
    "url": "http://otda.ny.gov/"
  },
  "serviceArea": {
    "@type": "State",
    "name": "ocd-division/country:us/state:ny"
  },
  "serviceChannel": {
    "@type": "ServiceChannel",
    "serviceUrl": "https://mybenefits.ny.gov/"
  },
  "serviceType": {
    "@type": "ServiceType",
    "name": "Food Benefits",
    "serviceTaxonomy": "http://openeligibility.org/",
    "serviceType": "107-03-02"
  },
  "url": "http://otda.ny.gov/programs/food-stamps/"
}

```

### *Representing New York State Supplemental Nutrition Assistance Program using Schema.org and JSON-LD*

The properties in the JSON-LD representation correspond to properties in the schema.org types. Note that here only properties that are defined are specified, and others are omitted. When specifying other services there may be additional properties.

Next we'll walk through some of the details of the particular service properties represented.

#### **Service Provider**

The service provider represents the [GovernmentOrganization](#) that provides the service.

#### **Service Audience**

The service audience contains information about the group that is available to use the service. It is stored in the `audience` property. In order to be specific about the audience that the service targets, the type `CivicAudience` is specified. Each audience, may have one or more `audienceTypes`, that identify a group to which the service is targeted.

It is valuable that these audience types are consistent when specifying multiple services, and come from a common taxonomy. In the example, *Low-Income*, is one of the many Human

Situations in the [Open Eligibility Human Service](#) taxonomy.

Additional Properties	<p>Government services may be targeted at individuals and businesses, represented as the types <code>CivicAudience</code> and <code>BusinessAudience</code> in the schema.</p> <p>These types have additional properties that can be used to further describe the particulars of the target of the service.</p>
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### Service Area

The `serviceArea` property encodes the geographic area targeted by the service. The schema.org type [AdministrativeArea](#) has a number of sub-types that may be used to provide more context to this area. In this example the `serviceArea` has a type of [State](#).

The name of the service area is free-form, but we recommend specifying the name using a machine readable taxonomy, the [Open Civic Division IDs](#). The example uses these IDs to name the geographic area as `ocd-division/country:us/state:ny`, corresponding to New York State.

### Service Channel

The `serviceChannel` property describes the access channels of the service. This particular service can be accessed online from the url <https://mybenefits.ny.gov/>, encoded with the `serviceUrl` property.

Additional Properties	<p>There are many additional <code>ServiceChannel</code> properties that encode other access channels, including via the postal system, from a physical location and via SMS.</p> <p>Of other note is <code>processingTime</code>, which encodes the expected processing time of that channel.</p> <p>Additionally language restrictions for the channel can be specified with <code>availableLanguage</code>.</p> <p>Lastly, the <code>ServiceChannel</code> itself can contain an optional <code>Audience</code> property, which allows for a single service to be offered from multiple channels, each restricted to a particular audience. For example, a geographic restriction specified using the <code>geographicArea</code> property on <code>CivicAudience</code>.</p>
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### Service Type

The `serviceType` property specifies a type for the service being represented. In addition to the readable name, there are two sub-properties; `serviceType` and `serviceTaxonomy` that may

be used to provide service type information conforming to a specific taxonomy. In this example, the `serviceType` is encoded using the [Open Eligibility Human Service Taxonomy](#). This taxonomy can also be used to specify civic audience types.

## Philadelphia Street Event Permit

The second example is a service that neighborhoods apply for in order to host an event that requires a street closing. There are a number of notable elements of this service that are highlighted below.

```
{
  "@context": "http://schema.org",
  "@type": "GovernmentService",
  "@id": "http://www.philadelphiastreets.com/transportation-highways-intro.aspx",
  "name": "Street Event Permit",
  "alternateName": "Block Party Permit",
  "description": "Permit for a street event",
  "produces": {
    "@type": "CivicPermit",
    "name": "Street Event Permit"
  },
  "provider": {
    "@type": "GovernmentOrganization",
    "name": "Streets Department",
    "url": "http://www.philadelphiastreets.com/"
  },
  "serviceArea": {
    "@type": "City",
    "name": "ocd-division/country:us/state:pa/place:philadelphia"
  },
  "serviceChannel": {
    "@type": "ServiceChannel",
    "serviceLocation": {
      "@type": "CivicStructure",
      "name": "Philadelphia Municipal Services Building",
      "address": {
        "@type": "PostalAddress",
        "streetAddress": "1401 John F Kennedy Blvd",
        "addressLocality": "Philadelphia",
        "addressRegion": "PA",
        "postalCode": "19102"
      },
      "openingHours": "Mo-Fr 08:00-17:00"
    },
    "servicePhone": "1-215-686-5560",
    "serviceUrl": "http://www.philadelphiastreets.com/transportation-highways-block_party-permit_app_process.aspx"
  },
  "serviceType": {
    "@type": "ServiceType",
    "name": "City Recreational Permit"
  },
  "url": "http://www.philadelphiastreets.com/transportation-highways-intro.aspx"
}
```

## Service Output

Some services, such as getting a drivers license or liquor license, produce output for users of the service. For this purpose a `GovernmentPermit` is included in the schema, which represents `CivicPermits` and `BusinessPermits` that the government issues.

In this example, the service includes the `produces` property that specifies a `CivicPermit`.

## Service Channel

This example includes both a `servicePhone` and `serviceLocation` properties on the `ServiceChannel`, representing how the service may be accessed by phone or in person.

## References

1. Civic services schema.org proposal - <http://www.w3.org/wiki/WebSchemas/CivicServices>
2. JSON for Linking Data (JSON-ID) - <http://json-ld.org/>
3. Open Civic Division IDs - <https://github.com/opencivicdata/ocd-division-ids>
4. Open Eligibility - A Human Services Taxonomy <http://openeligibility.org/>