

# Building APIs in Government for Social Good

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# My Time In Government

Deputy Chief Data Officer,  
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# ○ THE PLAN

- The Reality

- APIs: Sweat and Toil, CitySDK, MIDAAS

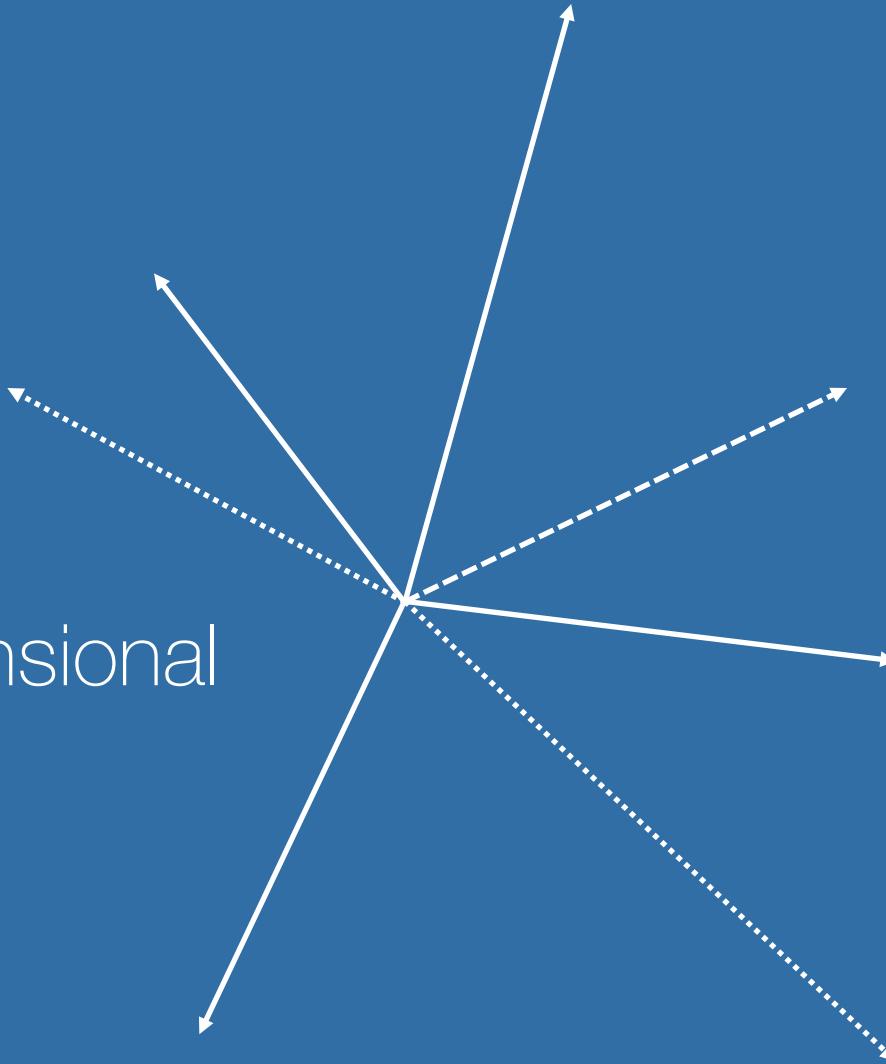
- Lessons

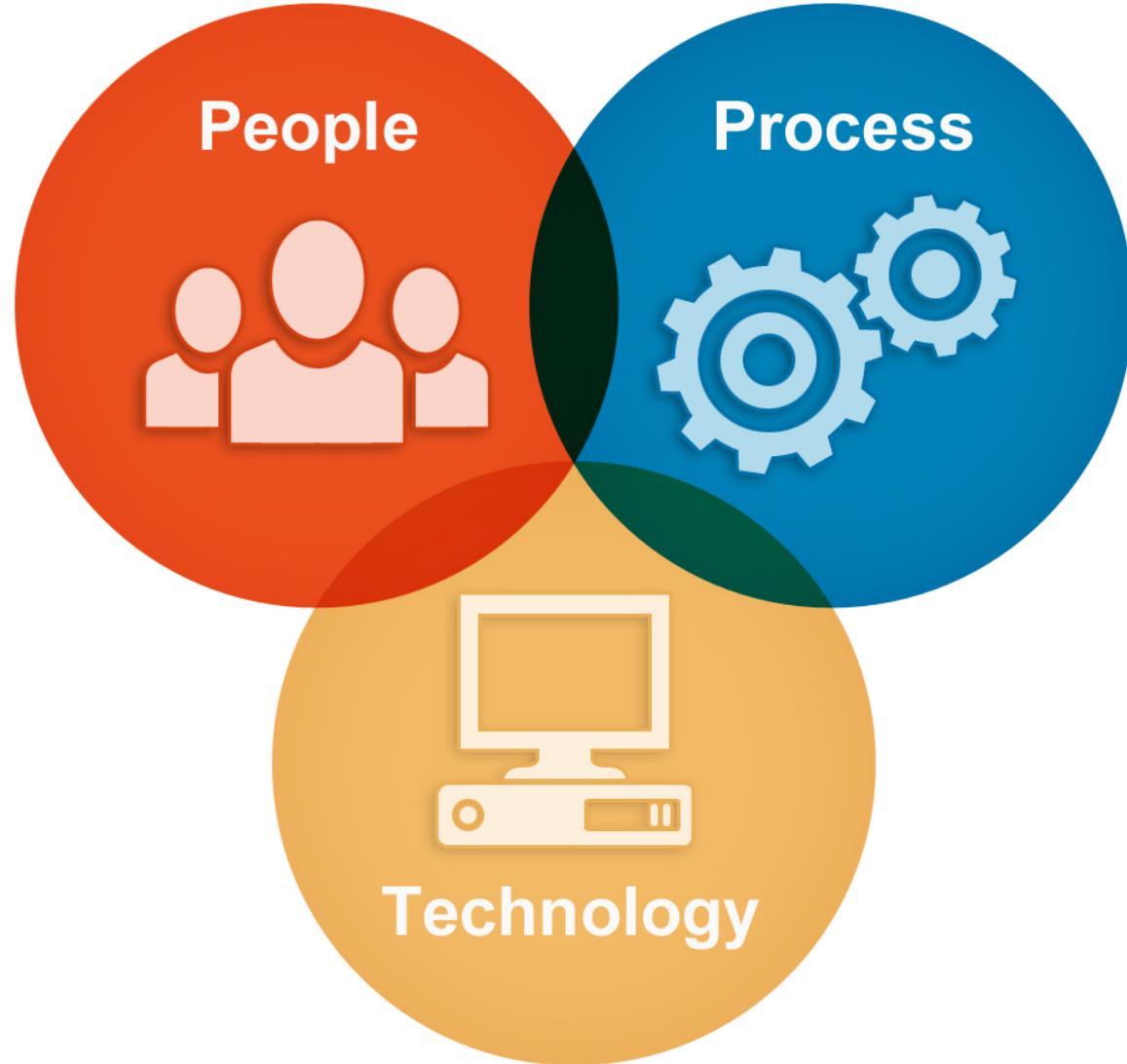
government takes  
on the hardest,  
inelastic problems

optimum



n-dimensional









[Home](#) • Transparency and Open Government

## Transparency and Open Government

### **Memorandum for the Heads of Executive Departments and Agencies**

**SUBJECT:** Transparency and Open Government

My Administration is committed to creating an unprecedented level of openness in Government. We will work together to ensure the public trust and establish a system of transparency, public participation, and collaboration. Openness will strengthen our democracy and promote efficiency and effectiveness in Government.

**Government should be transparent.** Transparency promotes accountability and provides information for citizens about what their Government is doing. Information maintained by the Federal Government is a national asset. My Administration will take appropriate action, consistent with law and policy, to disclose information rapidly in forms that the public can readily find and use. Executive departments and agencies should harness new technologies to put information about their operations and decisions online and readily available to the public. Executive departments and agencies should also solicit public feedback to identify information of greatest use to the public.

**Government should be participatory.** Public engagement enhances the Government's effectiveness and improves the quality of its decisions. Knowledge is widely dispersed in society, and public officials benefit from having access to that dispersed

M-13-13

 <https://www.data.gov>

 DATA.GOV

DATA TOPICS ▾ IMPACT APPLICATIONS DEVELOPERS CONTACT

# The home of the U.S. Government's open data

Here you will find data, tools, and resources to conduct research, develop web and mobile applications, design data visualizations, and [more](#).

**GET STARTED**  
SEARCH OVER [186,304 DATASETS](#)

*Federal Student Loan Program Data* 

**BROWSE TOPICS**

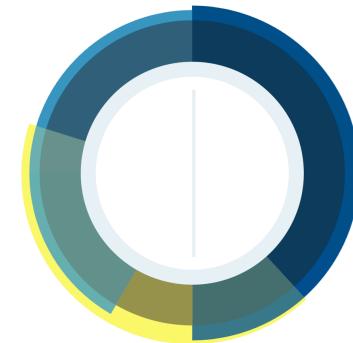
 Agriculture	 Business	 Climate	 Consumer	 Ecosystems	 Education	 Energy
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# Federal Source Code Policy

[Discuss](#) | [Edit](#) | [View PDF of Policy](#)[Introduction](#)[1 - Objectives](#)[2 - Scope and Applicability](#)[3 - Three-Step Software Solutions Analysis](#)[4 - Government-Wide Code Reuse](#)[5 - Open Source Software](#)[6 - Exceptions to Government Code Reuse](#)[7 - Implementation](#)[Appendix A - Definitions](#)[Discuss](#)[Edit this page](#)**M-16-21****MEMORANDUM FOR THE HEADS OF DEPARTMENTS AND AGENCIES****FROM:****Tony Scott****United States Chief Information Officer****Anne E. Rung****United States Chief Acquisition Officer****SUBJECT:****Federal Source Code Policy: Achieving Efficiency, Transparency, and Innovation through Reusable and Open Source Software**

The U.S. Government is committed to improving the way Federal agencies buy, build, and deliver information technology (IT) and software solutions to better support cost efficiency, mission effectiveness, and the consumer experience with Government programs. Each year, the Federal Government spends more than \$6 billion on software through more than 42,000 transactions.<sup>1</sup> A significant proportion of software used by the Government is comprised of either preexisting Federal solutions or commercial solutions. These solutions include proprietary, open source, and mixed source<sup>2</sup> code and often do not require additional custom code development.

When Federal agencies are unable to identify an existing Federal or commercial software solution that satisfies



COMMERCE DATA SERVICE



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# Sweat and Toil

<http://developer.dol.gov/others/sweat-and-toil>



# Building the API

1. Coalition and Urgency
2. Understand The Data Production Process
3. Find Natural Intervention Point
4. Learn Technology Constraints
5. Understand API User
6. Build
7. Go to 2

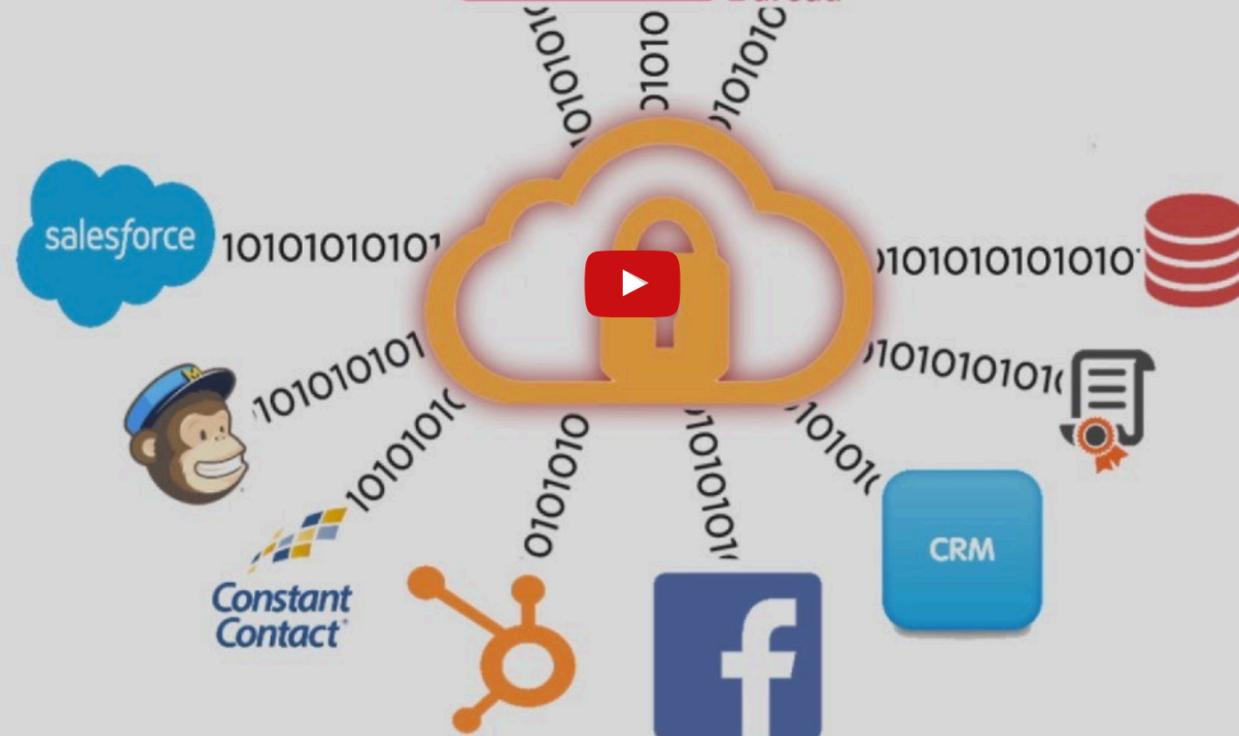
Python → MSSQL → Quarry

# Census CitySDK

<https://uscensusbureau.github.io/citysdk/>

Stats in Action: Arjuna Solutions

# United States Census Bureau™



Toolbox for civic innovators to connect local and national public data

# Building the API

1. Validate The Demand
2. Understand The User
3. Create MVP
4. Go to 2

MVP



JS

beta



node.js

# MIDAAS

<https://midaas.commerce.gov>



# Income Across **AMERICA**

Explore how income changes across geographies and demographics.

[Browse Topics](#)

or

[Explore Data](#)

## View and Build Powerful Visualizations

*Income distribution in the United States is a complex issue that everyone deserves the right to*

# Building the API

1. Validate Need
2. Validate with Domain Experts
3. Understand Initial User Stories
4. Understand Technical Constraints
5. Build
6. Go to 2

# Amazon Web Services

MVP



Redshift, Lambda, API Gateway

beta



Postgres, S3, EC2



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# Summary

People  
Scope  
Constraints  
Validate  
Show The Thing

# So Far

## Sweat and Toil

- 2016 Department of Labor's Innovation Award.

## CENSUS CitySDK

- 2016 Department of Commerce Gold medal
- 2016 Best Data API Award, API:World
- 2015 FedScoop Innovation Of The Year

The background of the slide features a soft-focus photograph of the United States Capitol building. The white neoclassical structure is partially visible against a light sky. In the foreground, there's a large, solid blue rectangular area containing the text.

Thank you

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