

Symbium

Tristan Krueger, Engineering Lead

Dr. Michael Genesereth, Leila Banijamali, Dr. Abhijeet Mohapatra

Revolutionizing citizen / government interactions

Revolutionizing citizen / government interactions

Starting with residential construction projects

7.5B Hours/Yr

**Lost to inefficiency in
appliance permitting process**

- 62.7M major appliances sold in the US in 2020
- Appliance permits take 5 days for initial review

Source: [Home Appliances – Statista](#)
[Permit Turnaround Times \(Oakland\)](#)

\$1.8B

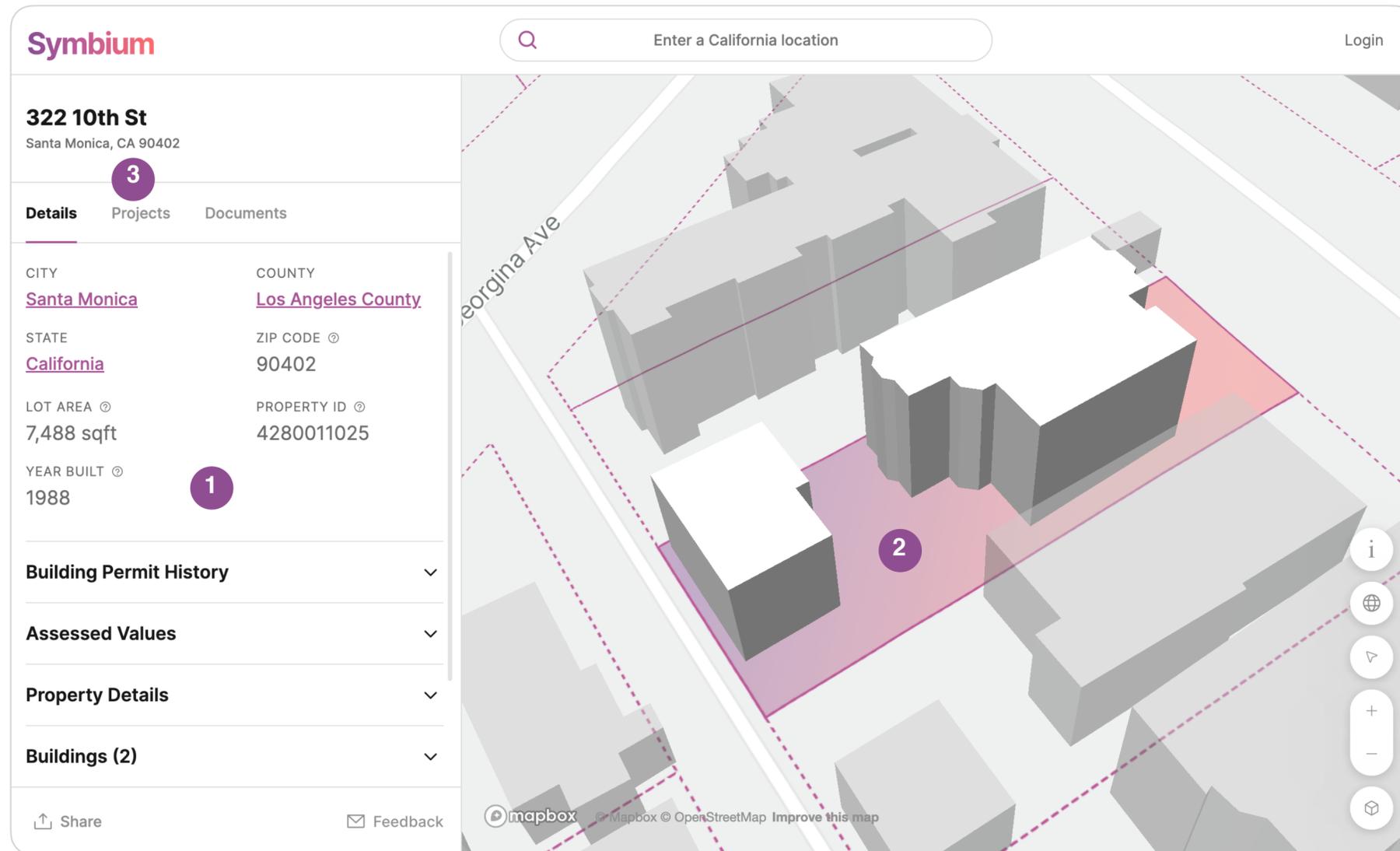
**Potentially lost to unclaimed
appliance rebates**

- \$4.5B projected appliance rebates available until 2030
- 40% of rebates are unclaimed

Source: [WSJ: Goodbye, Mail-In Rebates;](#)
[Inflation Reduction Act](#)

The Citizen's Dashboard

A platform for streamlining citizen-government interactions.



1 Information Access

Search by address or characteristics and easily identify what currently exists on a property.

2 Complaw® Analysis

Instant regulatory analysis for your project.

3 Transactions

File permit applications, apply for rebates, and schedule inspections in a few clicks.

Explore the Citizen's Dashboard

**How does Symbium create these
computational law solutions?**

**Can I build an 800 sqft cottage
on my property?**

A Look at the Code: Data

171 San Benito Way

San Francisco, CA 94127

Details Projects Documents

Environmental Hazards & Concerns

Zoning & General Plan

ZONING DISTRICT ⓘ

RH-1(D)

ZONING DISTRICT DESCRIPTION ⓘ

RESIDENTIAL- HOUSE, ONE FAMILY-
DETACHED

ZONING CLASSIFICATION ⓘ

Residential

Municipal Code



```
property(property1)  
property.zoning(property1,"RH-1(D)")
```

```
project(project1)  
project.property(project1,property1)  
project.new_unit(project1,new_unit1)  
project.new_unit.size(project1,new_unit1,800)
```

A Look at the Code: Rules

Cottages built in the RH-1(D) zoning district are limited to a maximum of 900 sqft.



```
project.noncompliant(PROJECT) :-  
    project.property(PROJECT,PROPERTY)  
    & property.zoning(PROPERTY,"RH-1(D)")  
    & project.new_unit.size(PROJECT,UNIT,NEW_UNIT_SIZE)  
    & greater_than(NEW_UNIT_SIZE,900)
```

A Look at the Code: Operations

An issued notice of code violation restricts cottages from being built on a property.

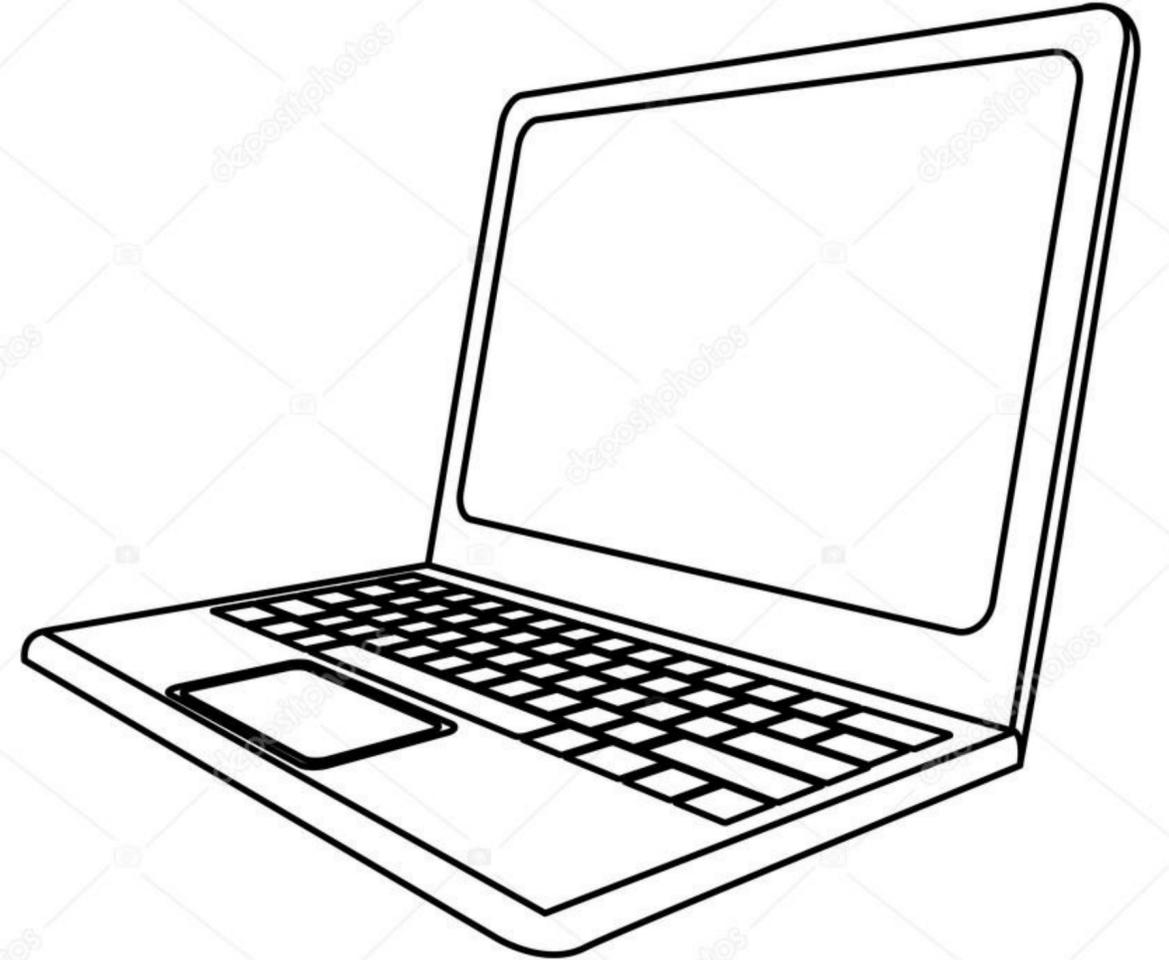
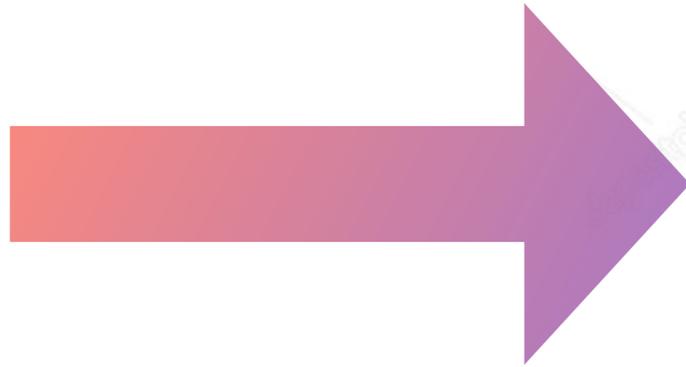


```
property.code_violation(PROPERTY) ::  
  project(PROJECT)  
  & project.property(PROJECT, PROPERTY)  
  & project.submittable(PROJECT)  
  ==> ~project.submittable(PROJECT)
```

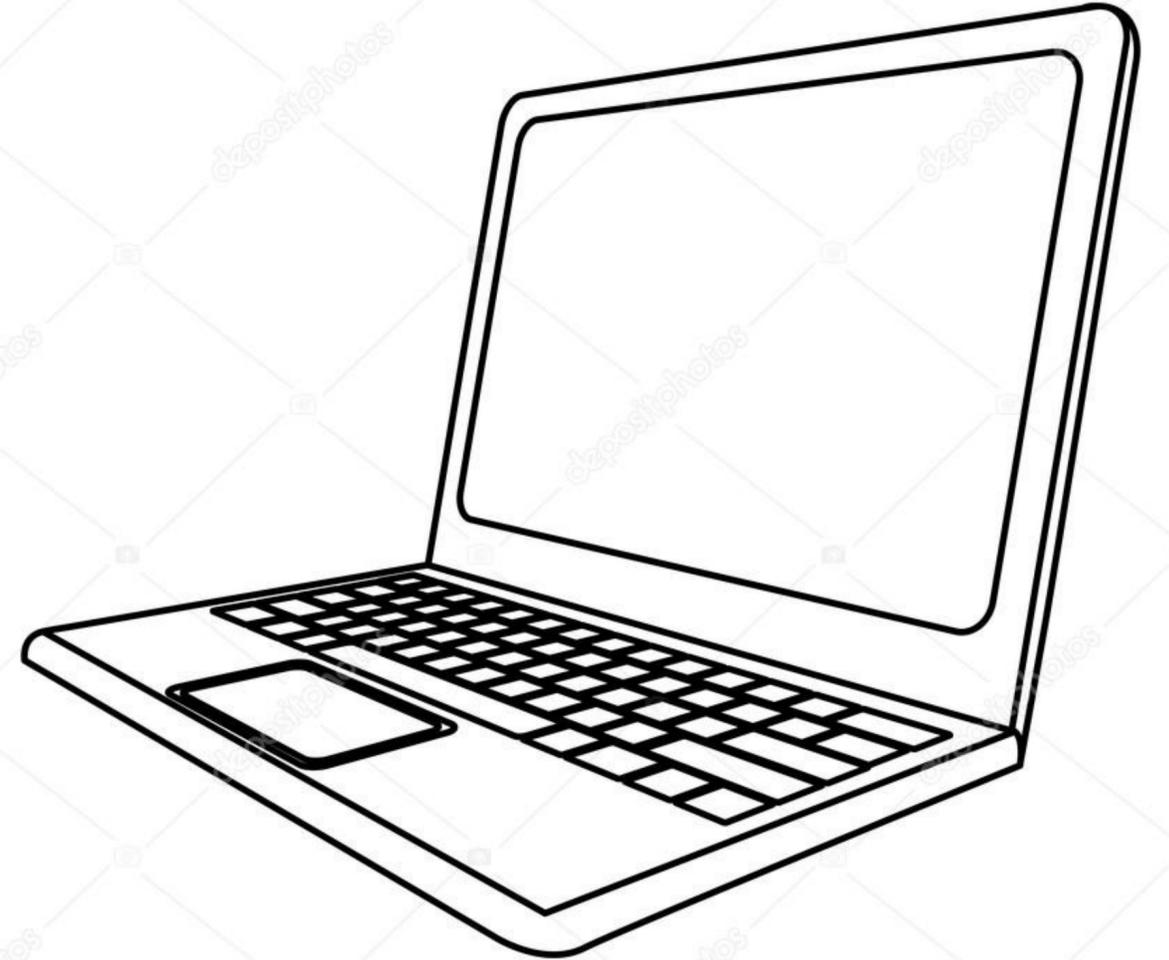
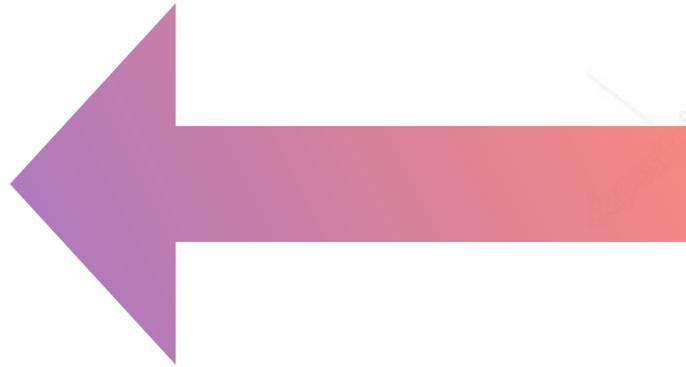
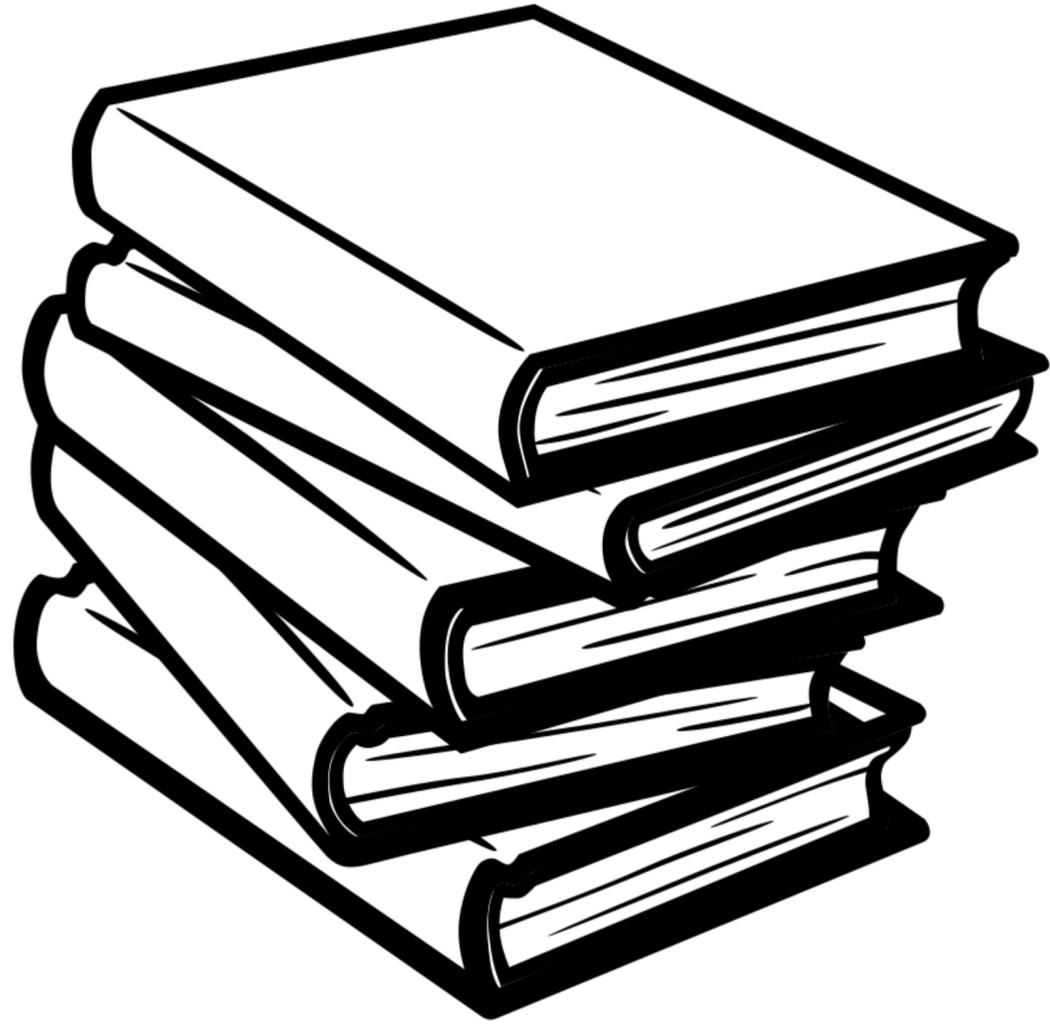
Logic Programming because . . .

1. Combine multiple, complex rulesets
2. Easily update complicated regulations
3. Reuse rules across multiple services

Symbium



Symbium



Symbium

Tristan Krueger

tristan@symbium.com

We're hiring!

careers@symbium.com