

Applying Rules as Code to the Social Safety Net

The promise and potential of digitizing benefits eligibility policy

What's rules as code?

The Organization for Economic Co-operation and Development (OECD) Observatory for Public Sector Innovation defines rules as code as “an official version of rules (e.g., laws and regulations) in a machine-consumable form, which allows rules to be understood and actioned by computer systems in a consistent way.” In taking a rules as code approach, government entities issue logic flows and computer-consumable code versions of laws, regulation, and policy alongside their legal text counterpart, via open source rules code and data feeds. All can then be integrated by any organization's digital system.



Digital Systems for Eligibility, Enrollment & Managing Benefits

Logic & Computer Code

Laws, Regulations & Policy

Contributing Author



Ariel Kennan
Fellow, Digital Benefits Network,
Beck Center for Social Impact + Innovation

How might rules as code apply to public benefits?

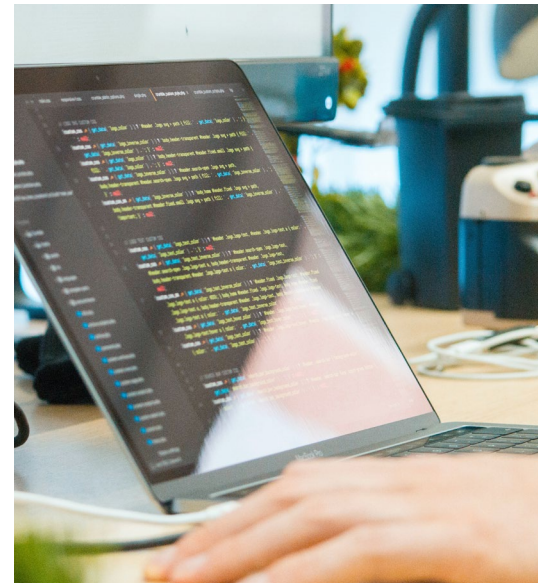
The benefits programs that comprise the United States social safety net are governed by a complex array of federal, state, tribal, and local entities.¹ Currently, the tangle of intersecting laws, regulations, and policies enacted and promoted widely by these entities takes the form of lengthy and complex text documents.

In the digital age, each state or local implementation entity must ultimately develop software that translates its governing documents into computer code to assist with eligibility pre-screening and final enrollment determinations. As a result:

- + Efforts to digitize policy are duplicated across locations and organizations, stretching the capacity of each implementor.
- + Much of the interpretation of the myriad governing documents is left up to the implementor's policy team, technology department, or outside vendor.
- + There is a great potential for error and inconsistency whenever changes or updates are made to a law, rule, or policy.
- + None of the 50 states currently make eligibility code open source, creating a transparency gap around determinations of any individual's or family's benefits eligibility.

In turn, a rules as code approach could:

- + Increase efficiency by eliminating duplicative efforts among disparate levels of government and delivery organizations.
- + Reduce the burden for public employees who are charged with administering and delivering benefits.
- + Reduce ambiguity during interpretation of policy as it is written into code for digital delivery systems.
- + Allow the creation of feedback loops between policymakers and software developers as they collaborate to develop the code.
- + Provide more predictability and transparency about benefits determinations for residents.
- + Enable more cross-benefit eligibility screening and enrollment.
- + Incentivize states, local governments, and delivery organizations to integrate open source rules code and data feeds into their eligibility screening and enrollment application software.
- + Enable powerful new tools to assist policymakers and legislators in modeling and measuring impacts of safety net policy changes.



i Find Out More

Read more about the path forward for a rules as code approach to benefits eligibility policy in the Beeck Center's February 2022 report [Benefit Eligibility Rules as Code: Reducing the Gap Between Policy and Service Delivery for the Safety Net.](#)

1. At the federal level, Congress enacts and amends legislation authorizing benefits programs, then agencies like the U.S. Department of Agriculture and the Centers for Medicare and Medicaid promulgate regulations and issue guidance documents to interpret the law. Responsibility for implementation is then borne by or shared with the states and territories, which must set forth their own rules and guidance to determine eligibility. Many states opt for a further level of delegation to counties or local organizations which function as the front line that interacts with residents.

Currently, there is an absence of standardization and transparency in social safety net governance. This fundamentally limits the ability of benefits administrators and delivery organizations to ensure access to the benefits for which residents are eligible. It is imperative that the United States begin formalizing an approach to adopting rules as code for the safety net, lessening the gap between policy and service delivery in digital systems.

Advancing Benefits Eligibility Rules as Code

The rules as code movement is nascent, but quickly growing and proving successful in other countries. As part of the Digital Benefits Network at the Beek Center, we invite continued conversation and collaboration to spark the next steps of this work.

+ Join our community of practice

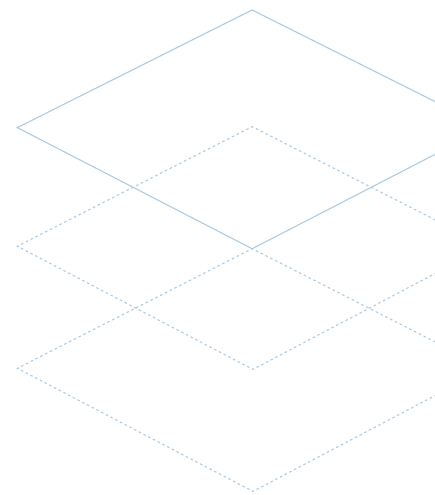
The Digital Benefits Network hosts convenings to connect organizations advancing this work and chart a course together, including:

- Eligibility rules for states, territories, tribes, and local governments
- Eligibility rules for federal agencies
- Advancing an open source data standard and syntax for U.S. benefits eligibility rules

+ Participate in research

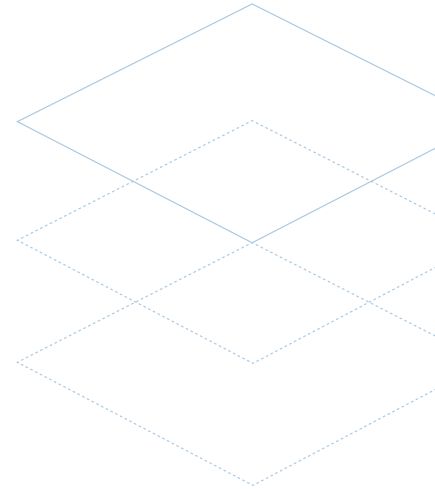
The Digital Benefits Network continues its research into benefits eligibility rules as code, with a focus on understanding barriers and enablers at every level of implementation. Topics of investigation include:

- How federal agencies and state and local counterparts communicate updates to rules and how tracking of updates could be automated
- Analyzing state, territorial, tribal, and local government eligibility and enrollment systems to better understand how these systems write, store, and utilize digitized rules, including where coded rules are used in automations to help advance determinations or make recommendations
- Further investigation into existing standards used in writing benefits eligibility logic and code, including drawing from adjacent use cases like tax and insurance policy and digitization
- Documentation of the processes used for writing rules into code in demonstration projects in the U.S. and internationally, including exploring the implications of ambiguous language in law, regulation, and policy for digitization into code



+ **Prove the concept**

The Digital Benefits Network is exploring how to create a proof of concept and build on the research and community. The anticipated pilot project will test a rules as code approach to multiple federal benefits programs in one or two states, territories, tribes, counties, or municipalities, with participation from one to two delivery organizations. The proof of concept will have built in measurement and evaluation to identify what works and can be scaled into a national approach including design, process, technical, and procurement recommendations.



Get in Touch

Our Digital Benefits Network team is here to help!

Visit us at the [Digital Benefits Hub](#)

Please contact us with any thoughts, questions, or potential collaborations via email at digitalbenefits@georgetown.edu