Case 3 - Rules as Code

Watch the introductory video

Overview

Governments around the world are beginning to invest heavily into digitalizing their services, processes, and institutions. This digitalization is primarily focused either internally, i.e. updating internal processes, systems, and infrastructure, or externally, i.e. digital service provision. However, when it comes to the process of governing, one of the most important aspects is that of rules. To-date, there has been little innovation within how rules are constructed, disseminated, and interpreted. Rules are written and enforced by a government, and, in cases of disagreement, interpreted by the judicial system. This leads to a situation where rules and regulations may be unclear, overly complicated, and rely heavily on human interpretation. In situations where governments, citizens, private sector, etc.. need to comply with these rules and regulations, especially within their technological systems, it is likely that machine readable rules would be beneficial. It is exactly this notion that has given rise to the popularity of rules as code. Simply put, rules as code implies that rules, in addition to their written form, should be available as code. It is hypothesized that this will allow for easily implementation of rules and regulations, decrease complexity, and increase understandability. However, there are, currently, limited examples of this in practice; though governments such as New Zealand (https://apolitical.co/en/solution_article/new-zealand-explores-machine-readable-laws-to-transform-government, https://serviceinnovationlab.github.io/projects/legislation-as-code/) have made attempts at understanding the when, why, and how associated with the implementation of rules as code.

Due to the potential impact of this innovation, and the current lack-of-understanding associated with its implementation, participants in this case should expect to explore the following questions:

- What are technical requirements for the implementation of a rules as code system?
- What are the potential barriers associated with rules as code?
- When is a rules as code system appropriate?
- How can a rules as code system be implemented?
- What are the primary benefits of the implementation of rules as code?

In order to answer these questions, it is expected that participants:

- Interview policy makers and other relevant stakeholders to understand their beliefs, values, and interpretations about rules as code
- Identify a potential use case for rules as code
- Implement a minimum viable product (MVP) version of a rules as code system

As a starting point, here are some potential useful resources:

https://www.digital.nsw.gov.au/digital-transformation/policy-lab/rules-code
https://openfisca.org/en/index.html
https://github.com/ServiceInnovationLab/example-rules-as-code

Expert and case mentor

Dr. Keegan McBride, GovAiLab Lab Manager, Research Fellow – School of Information Technologies, Information Systems Research Group, TALTECH