Policy as Code, Rules as Code

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Definition... *What it Means*

"Rules as Code" is a way of encoding rules for automated reasoning. *"Rules as Code" helps computers reason about rules.*

"Policy as Code" is a way of encoding policies for automated governance. *"Policy as Code" helps computers use rules to govern.*

Business Brief

The approach involves creating rules that are better suited for digital service delivery, creating software tools to write the rules into code, and then using that code as a basis for service delivery and decision making.

Coded rules can automate certain decision-making in government. They are particularly well-suited to yes/no and if-this-then-that decisions, such as eligibility for benefits or obligations to pay tax.

Making rules machine readable helps both civil servants and citizens clearly understand their intent, and execute them.

Why It Matters

Rules developed in the government are complex and often ambiguous. When rules require amendments, it becomes a challenge to make changes without introducing unintended consequences.

When software developers and system administrators implement IT systems based on these rules, the complexity and ambiguity can often lead to a confusing user experience and worse, broken processes.

Each technology trend briefing paper follows a common template:

Technical Brief

Policy as code is the ability to regulate machines in line with government. Common Logic is one approach to describing logic in an automatically usable way. This enables logical and **accessible policymaking** for humans and machines.

Aspect	Common Logic (CL) (Wkipedia)
Standardization	ISO/IEC 24707 standard
Readability	Plain Language
Power	Very high
Big strength	Can say complex ideas directly

E.G.. THE BRITISH NATIONALITY ACT AS A LOGIC PROGRAM (http://games.stanford.edu/compalw/readings/british_nationality.pdf)

[WIP]

- ***Industry usage*** *offers an understanding of how the technology is currently used or thought to be used in the industry when commercially available. This section clarifies the benefits of the technology through examples.*
- ***Canadian Government use*** *details how the technology is currently used or thought to be used in the context of the Federal Canadian Government when commercially available. This intent is to provide an understanding of how the technology could ultimately benefit the federal government in regards to the delivery of services to Canadians through short examples.*
- ***Implications for Shared Services Canada (SSC)*** *demonstrates the clear and measurable benefits that pertains to Shared Service Canada when adopting the use of the technology. This section is comprised of these following subsections :*
  - ***Value proposition*** *illustrates the potential strengths and opportunities that SSC can encounter by leveraging the technology.*
  - ***Challenges*** *outlines the risks and difficulties associated with the technology that includes both risks of implementation such as the development of the product or the risks of solution by adopting the technology.*
  - ***Considerations*** *presents any recommendations SSC may have for another department of the Government of Canada that wishes to adopt and leverage the technology.*

Development Process

External market trends, private-public sector reports, online trends and Government of Canada strategic plans are all factors considered when selecting a topic for development. Once a topic is selected for development, it undergoes a five phase development process prior to publishing.

WIP: Reference Canada's National Artificial Intelligence Strategy: AI for All & Standards Council of Canada

Sources

Four things you should know about Rules as Code | GovInsider (https://govinsider.asia/inclusive-gov/four-things-you-should-know-about-rules-as-code/)

Emerging Technology Guide: Rules as Code | Digital.NSW (https://www.digital.nsw.gov.au/digital-transformation/policy-lab/rules-code)

Why Policy as Code? (hashicorp.com) (https://www.hashicorp.com/blog/why-policy-as-code)

Alternative Definitions :

- "Rules as Code (RaC) is an innovative approach to rulemaking that encourages governments to create a trustworthy interpretation of rules in a machine-consumable form". - Think7 [1] (https://oecd-opsi.org/wp-content/uploads/2024/04/Rules-as-Code-in-Canada.pdf)
- "Rules as Code (RaC) is the process of encoding legislation into machine-executable formats to enhance public service delivery by improving non-expert access to complex laws, automating the downstream impacts of legislative changes, facilitating AI use in governance, and enabling agencies to simulate policy impacts before implementation". - CSPS-EFPC [2] (https://www.think7.org/publications/rules-as-code-for-a-more-transparent-and-efficient-global-economy/)

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