

Towards a Vocabulary for Open Public Policies

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ABSTRACT

Despite the large volume of policies and other formal decision instruments in government and international organizations, policy repositories with rich metadata across government and public administration jurisdictions are virtually nonexistent. The lack of such infrastructure and technical resources makes learning within government, across political and economic regions (such as the EU) and cross-border learning challenging. The use of open standards such as the European Union Interoperability Solutions for Public Administrations (ISA) Core vocabularies for describing government policies could enable the development of robust intra and inter-government policy indexing and search infrastructure. This poster describes a policy vocabulary developed through the systematic and detailed analysis of policy documents spanning several sectors. We present the conceptual model for the vocabulary and describe its major classes.

CCS Concepts

• **Computing methodologies** → **Ontology engineering** • **Information systems** → **Resource Description Framework (RDF)** • **Information systems** → **Web Ontology Language (OWL)** • **Applied computing** → **E-government**

Keywords

Public Policy; Open Policy; Policy Learning; Open Data; Public Policy Vocabulary

1. INTRODUCTION

Public policies provide the principles that guide the actions taken (or to be taken) in governance. Policies essentially provide a framework for decision making in public administrations and societies. While there is a large body of literature on public policies, scholarly work on formal descriptions of public policies are very few. Albeit there are formal conceptualizations of formal policies or rules governing systems (e.g. security policy of software systems), similar shared conceptualizations for public policies are rare and none is available in the public domain as some form of standard. Faced by the challenge to develop public policy repository spanning public administrations for the purpose of

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comparability and cross-learning, the need for a shared conceptualization of public policy to underpin such infrastructure arises. This poster presents one shared conceptualization of public policy resulting from the detailed analysis of public policies in Republic of Ireland, United Kingdom, France and Belgium. The result is a lightweight ontology or vocabulary that can describe Public Policy across sectors of the different public administrations. In the rest of the poster contribution, we present what we describe as the Core Public Policy Vocabulary (cppv). The Core Public Policy Vocabulary is envisaged as the formal foundation for a pan-European or Open Public Policy Repository (OP2R). Through the OP2R infrastructure, cross-border policy learning and government transparency across the Europe is significantly enhanced.

2. CORE PUBLIC POLICY VOCABULARY

The developed vocabulary or lightweight ontology is designed to enable the description of the salient elements of a public policy. The salient or core elements of a public policy were determined by identifying the most common elements across public policies across different sectors and governments. The parsimony principles we followed were by design consistent with the principles underpinning the EU ISA's Core Vocabularies - http://ec.europa.eu/isa/ready-to-use-solutions/core-vocabularies_en.htm.

2.1 CPPV Classes

This section describes the main concepts or classes in the vocabulary. The description of the prefix for the classes is presented in Table 1.

- *cppv:GuidingFramework*; A set of rules either in the form of principles or regulations, which guide the policy.
- *cppv:GuidingPrinciple*; The set of principles agreed to be followed through the policy life time.
- *cwr:institutional_structure*; Explicit and implicit institutional rules and policies designed to provide a structure where various work roles and responsibilities are delegated and coordinated [4].
- *objectives-ont:Objective*; Top level class for Goals and Objectives [2].
- *cppv:OversightEntity*; A distinct or independent body charged with supervision and observation of policy implementation.
- *prov:Plan*; A plan is an entity that represents a set of actions or steps intended by one or more agents to achieve some goals [5].

Table 1. Namespaces

Prefix	URI
cppv	http://www.egov.deri.ie/cppv.owl#
foaf	http://xmlns.com/foaf/0.1/
cpsv	http://purl.org/vocab/cpsv#
cwr	http://www.fao.org/aims/aos/cwr.owl#
fabio	http://purl.org/spar/fabio/
objectives-ont	http://www.daml.org/experiment/ontology/objectives-ont#
prov	http://www.w3.org/ns/prov#
schema	http://schema.org/
dct	http://dublincore.org/terms/
dcterms	http://purl.org/dc/terms/

- o *dcterms:Policy*; A plan or course of action by an authority, intended to influence and determine decisions, actions, and other matters [3].
- o *fabio:PolicyDocument*; A document embodying a policy that describes and defines how something should be done [6].
- o *cppv:Programme*; A planned series of future events or performances. Structures for implementing and executing policies.
- o *cpsv:PublicService*; This class represents the service itself. A public service is the capacity to carry out a procedure and exists whether it is used or not. It is a set of deeds and acts performed by or on behalf of a public agency for the benefit of a citizen, a business or another public agency [1].
- o *cppv:Regulation*; The system of rules which a particular country or community recognizes as regulating the actions of its members and which it may enforce by the imposition of penalties.
- o *cppv:Sector*; The governmental sector that is impacting and impacted by the policy.
- o *cppv:Stakeholder*; All key parties influenced or affected by the implementation of a policy.
- o *cppv:Vision*; An organisation’s road map, indicating both what it wants to become and guiding transformational initiatives by setting a defined direction for growth or achievement.

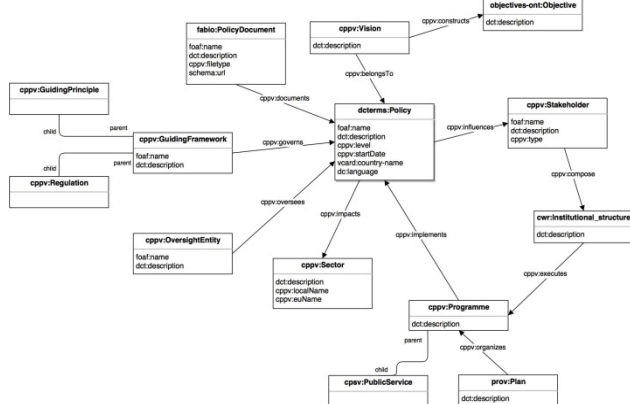


Figure 1. Core Public Policy Vocabulary Conceptual Diagram.

2.2 CPPV Object Properties

A Policy object in the vocabulary has the following self-descriptive properties - *cppv:belongsTo*, *:composed*, *:constructs*, *:documents*, *:executes*, *:governs*, *:hasVision*, *:impacts*, *:implements*, *:influences*, *:isImpactedBy*, *:organizes*, *:oversees*, *:relatedTo*, and their reversed relations.

2.3 cppv Data Properties

In addition, every Policy is characterized by the following data properties - *dct:description*, *cppv:euName*, *cppv:filetype*, *cppv:level*, *cppv:localName*, *foaf:name*, *cppv:startDate*, *cppv:type*, and *schema:url*.

3. USE CASES OF CPPV

Designed as a core vocabulary, CPPV provides a reusable and extensible data model that describes public policy in a context-neutral way for developing systems or sharing public policy information as open documents. Using this semantic asset, three use cases are being considered for the resulting policy repository or knowledge base. These are Semantic Policy Search Engine, policy learning and predictive policy analytics. The first use case enables discovery of policies in a Centralized European Semantic Public Policies Repository by a wide spectrum of actors with interest of Public Policies. The second facilitate Government to Government policy learning and comparability of policies in similar domain across public administration jurisdiction. The third enables the tagging of policies with affective information or public sentiments and using such information for predicting the tags for future policy documents added to the repository.

4. CONCLUSIONS AND ONGOING WORK

We are currently in the second stage of the expert review process of the vocabulary. At the same time, we are developing the above use cases to demonstrate the practical applications of the CPPV vocabulary complemented by the existing ISA Core Vocabularies. In the near future, we intend to propose the CPPV vocab as a candidate ISA Core Vocabulary.

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