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# Towards personalised public service co-creation using core vocabularies

Alexandros Gerontas\*, Dimitris Zeginis†, Efthimios Tambouris\*, Konstantinos Tarabanis\*†

\* University of Macedonia, Thessaloniki, Greece

† Information Technologies Institute, Centre for Research and Technology Hellas (CERTH), Thessaloniki, Greece

Email: [agerontas@uom.edu.gr](mailto:agerontas@uom.edu.gr), [zeginis@uom.edu.gr](mailto:zeginis@uom.edu.gr), [tambouris@uom.edu.gr](mailto:tambouris@uom.edu.gr), [kat@uom.edu.gr](mailto:kat@uom.edu.gr)

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# Motivation

- PS provision is usually the main means for the implementation of a governmental policy targeting the fulfilment of citizens' needs.
- As PS provision is a major part of public sector operations, the opening of PSs highly contributes to the realization of the **Open Government** vision, promoting transparency and trust between public administrations and citizens. Furthermore, active participation of citizens in PS improvement is facilitated, promoting **co-creation of PSs**.
- Embracing the need for a standard PS model, the European Commission (EC) has recently developed a PS model, termed **Core Public Service Vocabulary (CPSV)**. Subsequently, a linked data application profile of CPSV, i.e., **CPSV-AP**, has been developed.
- Although CPSV-AP is a promising standard, recent research has shown that further enhancement is needed in order to facilitate: (a) **PS personalization**, (b) **PS integration** and (c) **PS co-creation**

[Reference: A. Stamatis, A. Gerontas, A. Dasyras, and E. Tambouris, "Using chatbots and life events to provide public service information," ACM Int. Conf. Proceeding Ser., pp. 54–61, 2020, doi: 10.1145/3428502.3428509]



# Aim

- The aim, of this paper is to enhance CPSV-AP in order to support personalised integrated PS (IPS) co-creation.
- In order to enhance CPSV-AP, we reuse classes of other EC ISA/ISA2 core vocabularies, namely Core Criterion and Core Evidence Vocabulary (CCCEV), Core Person Vocabulary (CPV) and Core Business Vocabulary (CBV).
- Additionally, we reuse classes that have been defined in the framework of recent research on PS models .

[Reference: A. Gerontas, V. Peristeras, E. Tambouris, E. Kaliva, I. Magnisalis, and K. Tarabanis, “Public Service Models: a systematic literature review and synthesis,” IEEE Trans. Emerg. Top. Comput., pp. 1–12, 2019, doi: 10.1109/TETC.2019.2939485]

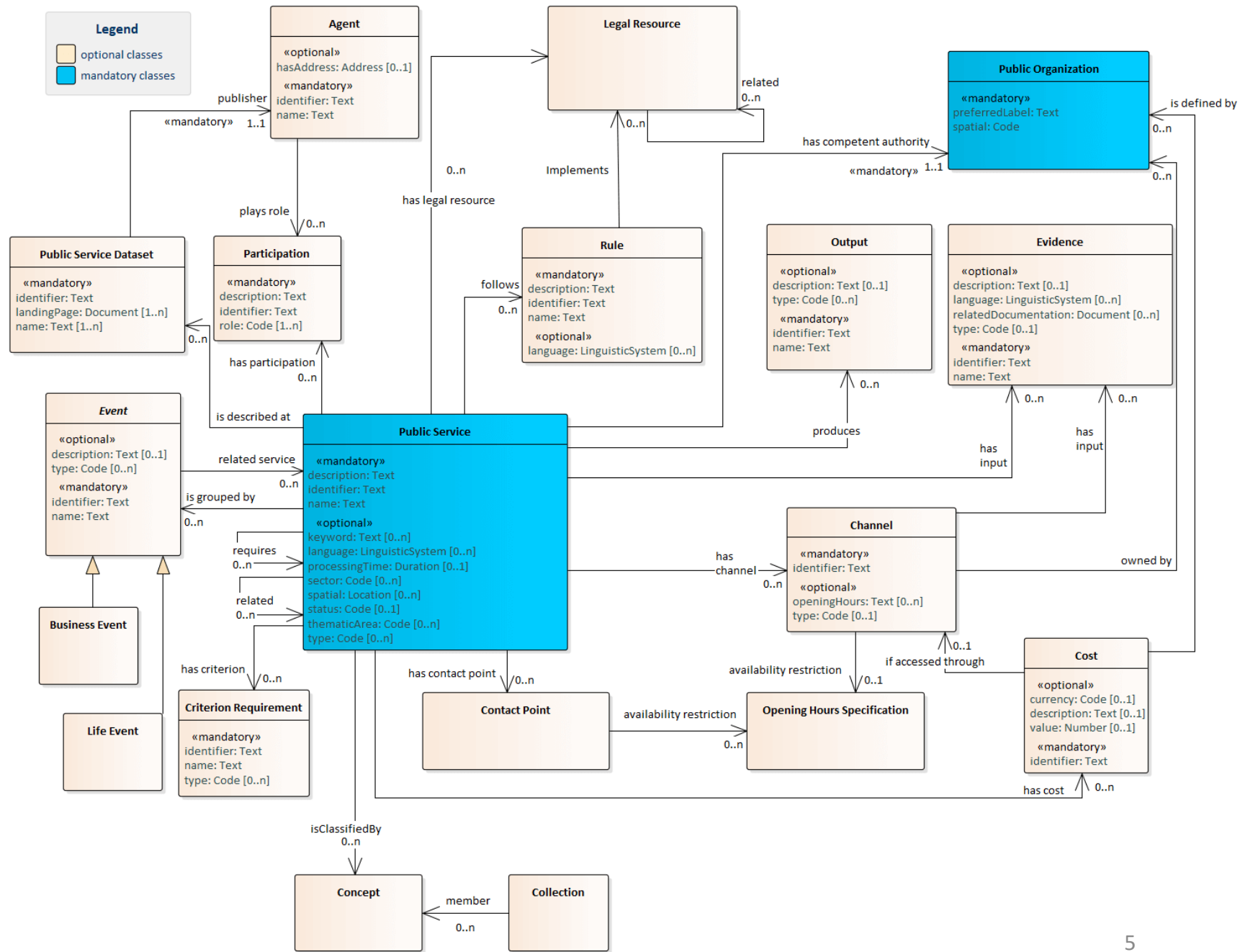


# Methodology

- Present the latest version of CPSV-AP (As-Is situation) and the relevant Core Vocabularies, i.e., CCCEV, CPV and CBV.
- Present related work on CPSV-AP.
- Critically evaluate CPSV-AP and other EC ISA/ISA2 core vocabularies in order to support personalized IPS co-creation.
- Enhance CPSV-AP by reusing classes from other EC ISA/ISA2 core vocabularies or classes that has been derived from related work.
- Present a usage scenario for demonstrating the use of enhanced CPSV-AP.
- Discuss the effectiveness of enhanced CPSV-AP for supporting personalized IPS co-creation based on the usage scenario.

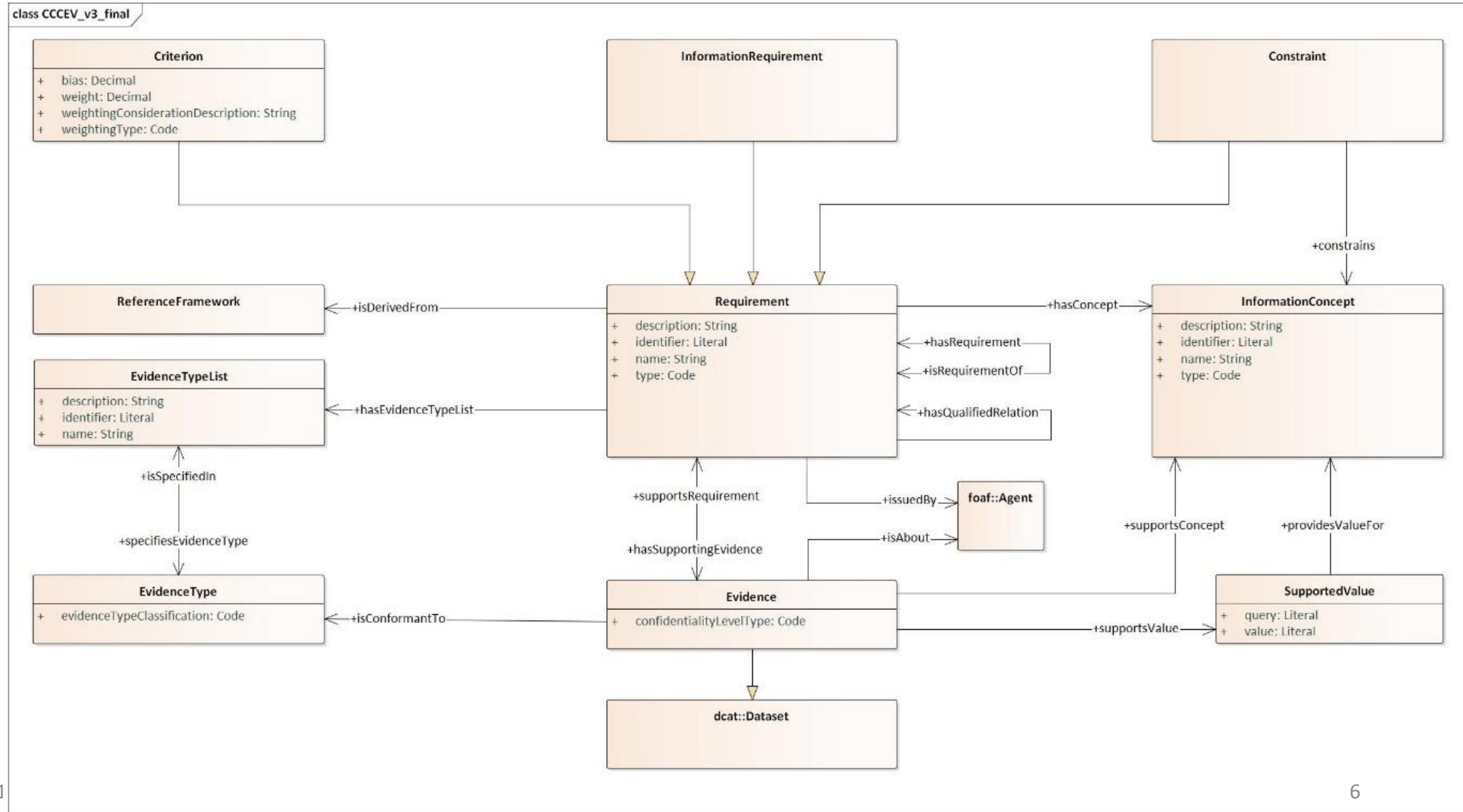
# CPSV-AP

class CPSV-AP



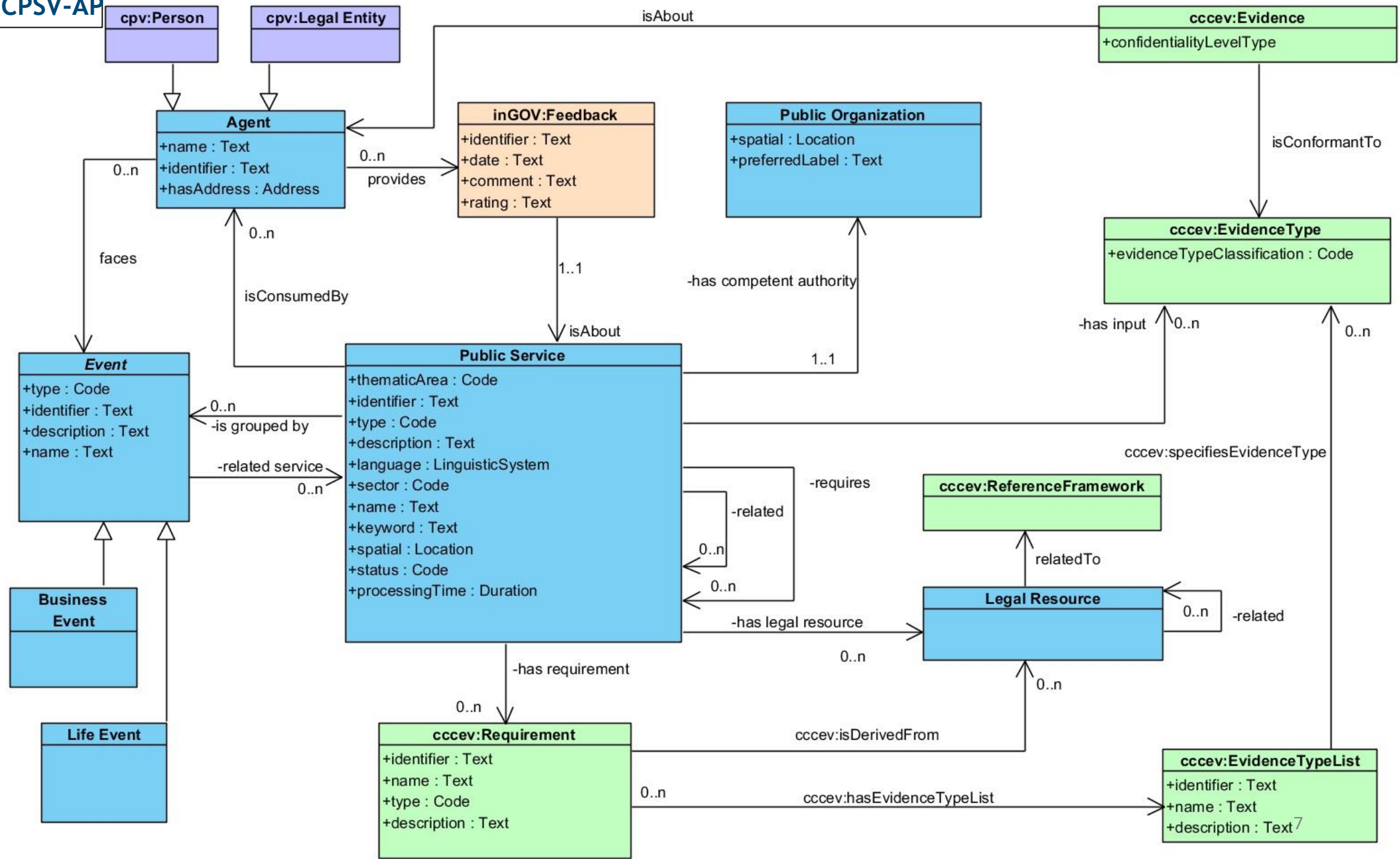
[Reference: DG DIGIT/ISA Programme, “D02.02 – Core Public Service Vocabulary Application Profile 2.2.1,” 2019]

# Core Criterion and Core Evidence Vocabulary

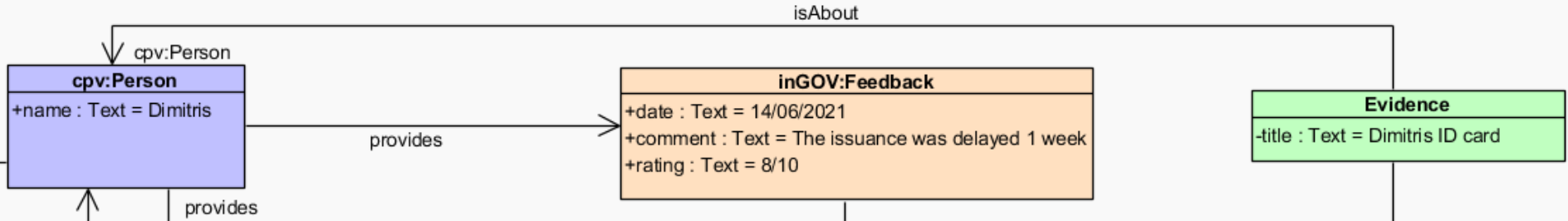


[Reference: European, "Core Criterion and Core Evidence Vocabulary v2.0.0," 2021]

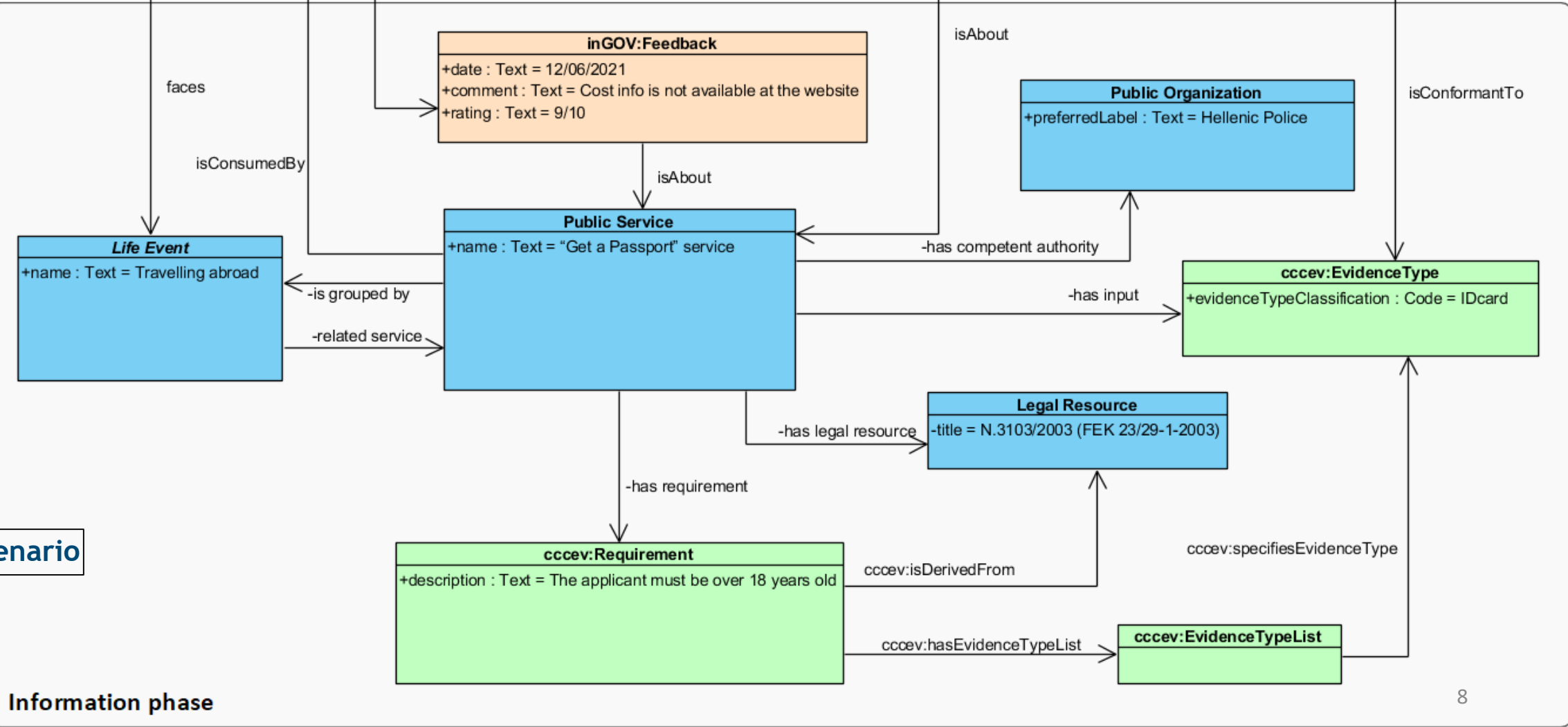
# Enchanted CPSV-AP



## Execution phase



## Usage Scenario



## Information phase





# Conclusions

- The enhanced CPSV-AP 2.2.1, that has been presented, is a first effort towards personalised public service co-creation.
- Future work includes two directions: (a) experiment with the Rule class of CPSV-AP, in order to fully address the PS versioning issue, and (b) apply the enhanced CPSV-AP to the pilots of **“Inclusive Governance Models and ICT Tools for Integrated Public Service Co-Creation and Provision” - inGov H2020 project** employing various technologies, as for example linked data, knowledge graphs, chatbots and mobile applications.

- inGov is a 3-year (1/1/2021-31/12/2023) Research and Innovation action funded by EU H2020 programme
- inGov aims to enhance existing and device new Policies, Methods and ICT Tools for **inclusive Integrated Public Service (IPS) Co-creation and Provision**
- inGov will capitalize on existing (mainly EU) relevant policies and initiatives, academic literature and practitioners good practices



# Thank you for your attention!

For more information on inGov see

[www.ingov-project.eu](https://ingov-project.eu)

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