

Towards Ontology Representation of Machine-Actionable DMPs

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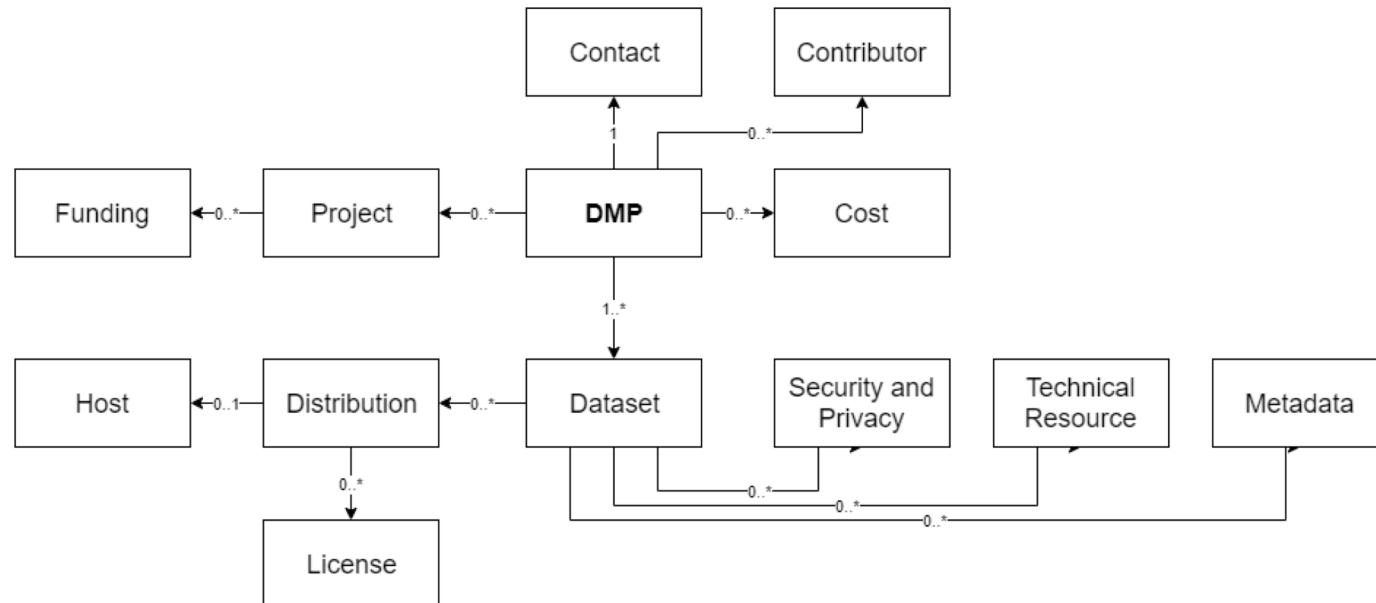
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Context: DMP Common Standard

- DMP Common Standard provides a tech-agnostic application profile
- Reuses concepts from existing ontologies (e.g., **dcat**, **foaf**)



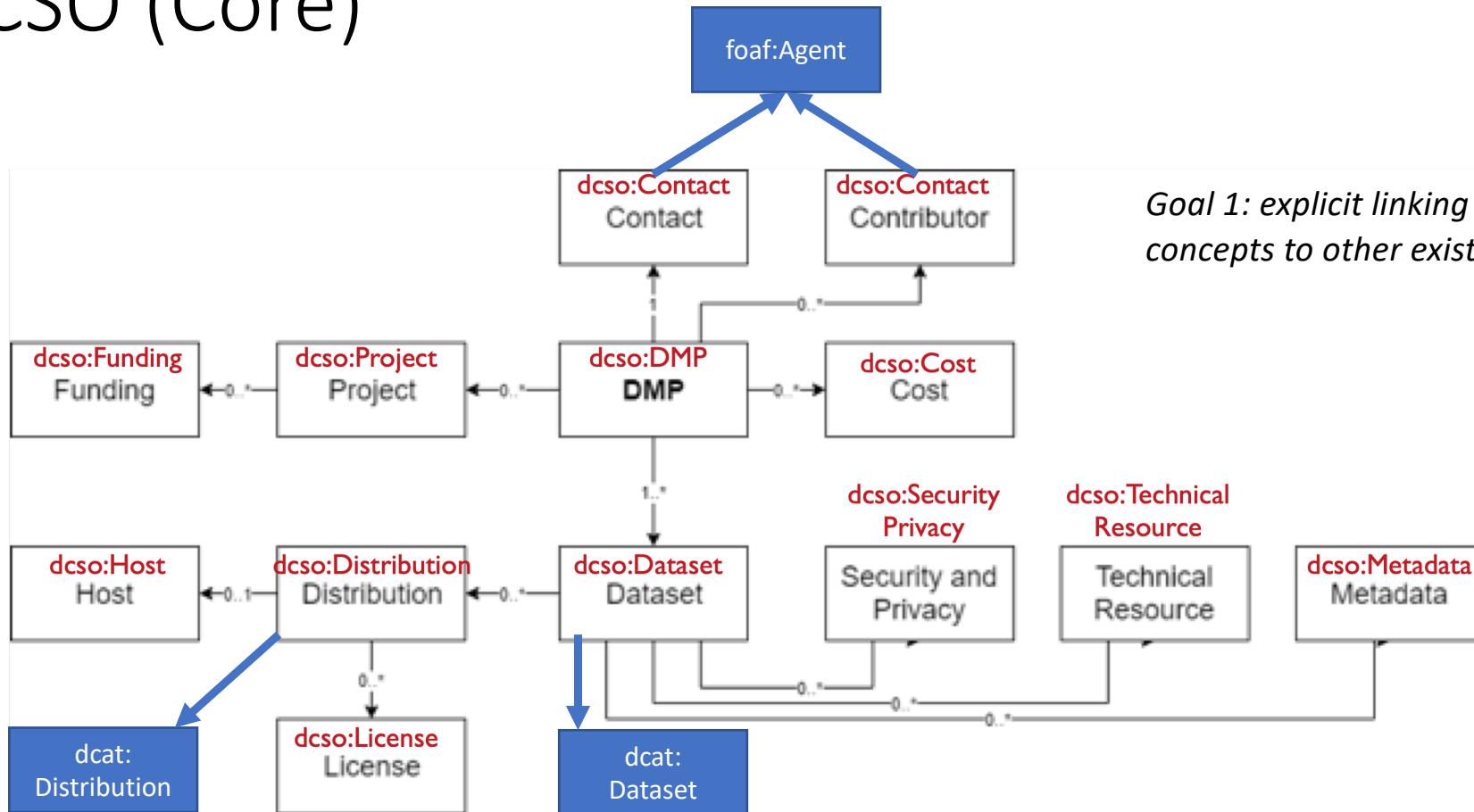
Why DCS Ontology (DSCO)?

- 1) To allow explicit linking of DCS concept to other existing ontologies
- 2) To facilitate definition of a set of (controlled) vocabularies for parts of DMP concepts
- 3) To facilitate an alternative extension mechanism of the DMP Common Standard

DMP Common Standard Ontology (DCSO)

- DCSO Core: <https://w3id.org/dcs/ns/core/>
- A “mirror” of the DCS concepts, attributes, & relations, plus
 - Identification Class with identifier type (e.g., “orcid”) and identifier value (e.g., “0000-0003-4333-2008”).
- Contains explicit mapping to existing ontologies (FOAF, DCAT)

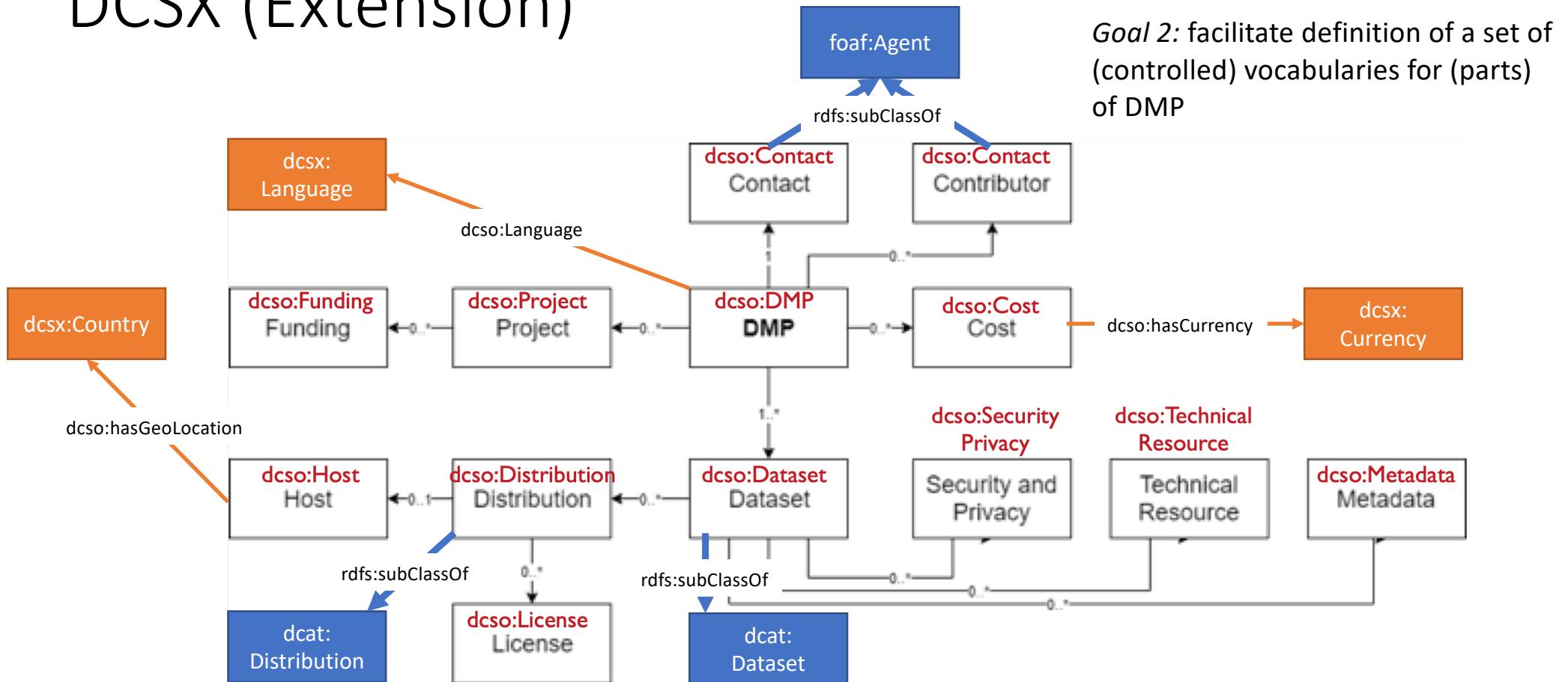
DCSO (Core)



Controlled Vocabularies for DCS

- DCSO Extension (DCSX): <https://w3id.org/dcs/o/ns/extension/>
- A “demo” of controlled vocabulary definition for DCS outside of core components
- Currently contains:
 - Countries (ISO-3166-1),
 - Currencies (ISO-4217), and
 - Languages (ISO 639-3).

DCSX (Extension)

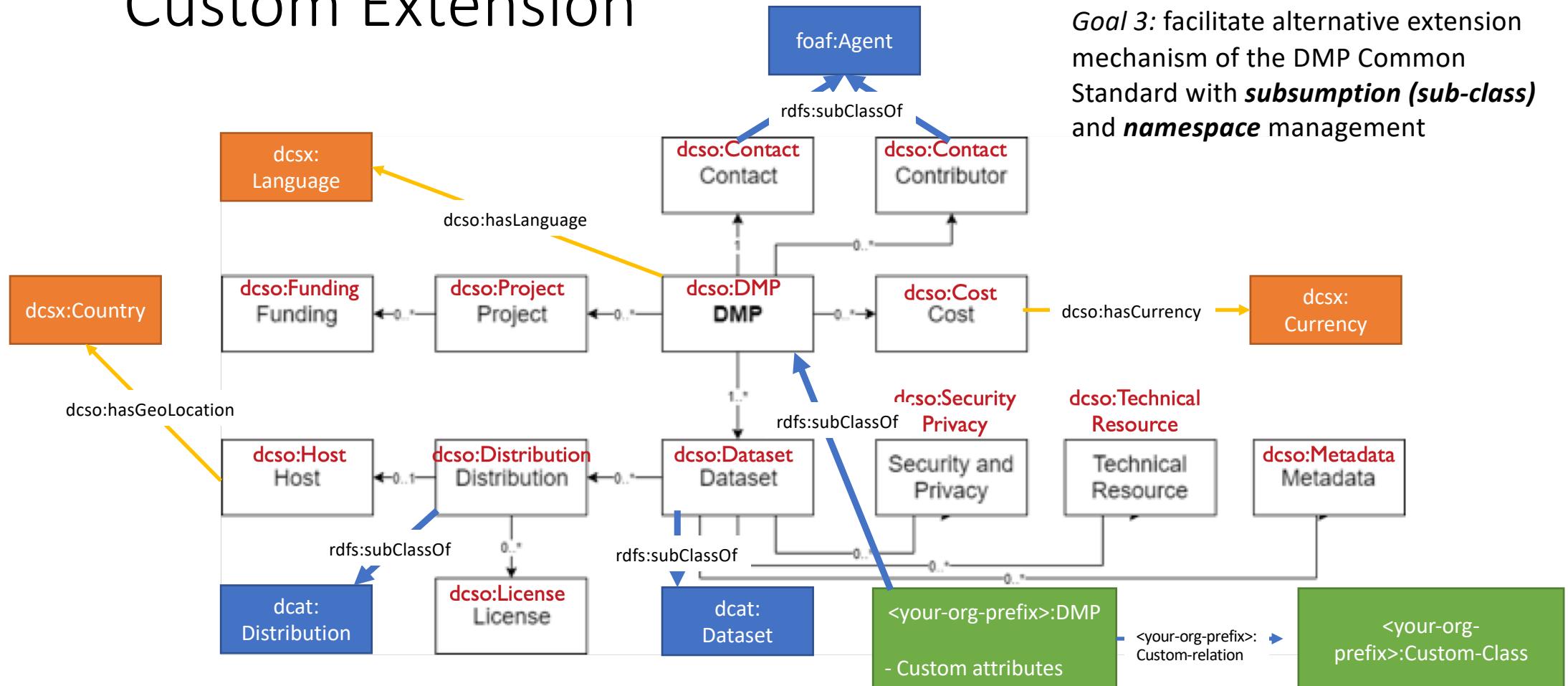


Goal 2: facilitate definition of a set of (controlled) vocabularies for (parts) of DMP

Extending DCSO with organization-specific concepts, attributes, and relations

- Natural extension capabilities of an ontology
- Additional attributes and/or relations can be accommodated by subclassing DCSO core concepts
 - Create your own extension within your own defined namespace
 - Maintain compatibility with the "core" DCS concepts, attributes, and relations

Custom Extension



How can we use DCSO?

- Data Stewardship Wizard → already allow exporting data in DCSO
- In development:
 - Transformation from DCSO instance to DCS JSON format and vice versa
 - DCSO instance validation (ShEx and SHACL)
- Interested to work with us?
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THANK
YOU!

