Spreadsheet - https://docs.google.com/spreadsheets/d/1ah4GQFlXuZiL6UeWAbHXt1iAlxEIidkC8g8lsSfNfRQ/edit#gid=0

Bioschema spec - https://bioschemas.org/profiles/Workflow/0.4-DRAFT-2020_05_11/

14 July 2020

Comparing dev.workflowhub.eu against bioschemas - Stuart waiting on the latest draft to be released.

Alan part of the complicated process of contributing to bioschemas. Being documented.

Renaming Workflow type to ComputationalWorkflow - leave room

Also replacing property for “mandatory”

Find alternative to Structured Data Testing tool which is getting decommissioned

- Stuart will check with Bioschema’s about testing

https://github.com/schemaorg/schemaorg/pull/2618
https://github.com/schemaorg/schemaorg/pull/2618#issuecomment-654987303

Test data in RO-Crate:

- Test suite definition (life monitor): https://github.com/crs4/life_monitor/blob/master/tests/test-suite-definition.json

WorkflowHub will have all the mandatory fields for DatCite and OpenAire, but this will not specifically be mandatory fields in the BioSchemas workflow scheme

We need separate meeting about describing containers

Documentation property?

https://covid19.galaxyproject.org/genomics/1-PreProcessing/
As example of linking instances where to run the workflow

23 June 2020

Followup call: 14th July 2020 11h CEST - 10h BST

Decision reuse https://schema.org/codeRepository to point to the source url (recommended, one) instead of “isBasedOn” (which can be used to attribute other workflows)

Decision Reuse http://schema.org/encodingFormat instead of adding new properties “format”

May need to distinguish programming language of two Galaxy formats, classic .ga and then “Galaxy Format 2” which is quite different (aka format2, a yaml based format file). (also have runtime platforms?). Danger that this would in workflow hub segregate workflows by subtype - where to add hierarchy of “Galaxy > .ga”? (Decision: Workflow Hub for now).

Description will still be parsed out of cwl if cwl abstract is given.

Discussed properties:

programmingLanguage - corresponds to workflow type on the website, ResourceType in DataCite and SoftwareType in OpenAire. Example: Galaxy

OpenAire property **ResourceType** and DataCite **resourceTypeGeneral** - in our case this will be “workflow”

url - url to the corresponding workflowhub page of the workflow, also corresponding to the ‘Landing page’ property of OpenAire.

isBasedOn - linking towards the source repository, for example github

conditionsOfAccess - corresponds to ‘Access Rights’ in OpenAire

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2 June 2020

Followup call: 23th June 2020 11h CEST - 10h BST

Discussed properties:

sdPublisher - current set to the person that provided the metadata, decision to change to the Workflow Hub itself - **Done**

publisher - where it came came from, e.g. Galaxy, github, or WF Hub if uploaded - **Done**

producer - to describe the Project or Team **Done**

provider deprecated (replaced with producer) **Done**

creator - the creators/ authors **Done**

maintainer - new recommended property to describe the uploader + additional people with manage rights **Done**

funder - example of cordis reference - https://cordis.europa.eu/project/id/730976

- https://schema.org/FundingScheme linked to funder
- Examples at the bottom of https://schema.org/Grant - funding looks ideal but not currently legal
- Is needed to fulfill the OpenAire “Funding Reference” property
  Done

datePublished - becomes an optional property, and we use the date a DOI was minted (this property is needed for dataCite) **Done**

creativeWorkStatus - Maturity level, to be added to BioSchemas **Done**

Identifier - can be DOI if this function is enabled in WorkflowHub **Done**

TODO: aligning JSON-LD in RO-crate with metadata on the WorkflowHub website (is it possible that the HTML metadata does not yet contain hasPart?)

Input and output -> how do these get marked up in EDAM?

The RO-Crate needs to support describing the test data, example data, tutorials (test data issue - https://github.com/crs4/life_monitor/issues/11)

I have asked that a GitHub issue is created

(from Carole) From Bioschemas Management - Workflow Working Group

Identified a need for representing a ‘FormalParameter’ of a workflow. They have defined it as

A formal parameter is a slot that may be satisfied when the workflow is run. It appears as an Input or Output of a Workflow. Alasdair also commented on the clarity for the use of the word ‘slot’.

Is FormalParameter just for Workflow or for a wider set of Software Applications?

Vote: Approve the creation of a FormalParameter type and profile?

Approved

ACTION: Inform WGLs of the approval but ask **for clarity on a couple of points**. Notably the term “slot”

Random things from chat

e.g. https://cordis.europa.eu/project/id/730976 would be a funding reference

https://schema.org/funder https://schema.org/FundingScheme

https://schema.org/Grant explains it more

https://github.com/schemaorg/schemaorg/issues/383

Stian suggests:

```
{ "@context": "http://schema.org/docs/jsonldcontext.jsonld",
  "@graph": [
      {"@id": "https://workflowhub.eu/workflow/15",
      "@type": ["Workflow", "SoftwareSourceCode"],
      "funder": {"@id": "https://ec.europa.eu/programmes/horizon2020/"},
      "funding": {"@id": "https://cordis.europa.eu/project/id/824087"}
      },
      { "@id": "https://cordis.europa.eu/project/id/824087",
      "@type": "Grant",
      "identifier": "H2020-EU.1.4.1.1.824087",
      "fundedItem": { "@id": "https://workflowhub.eu/workflow/15" },
      "funder": {"@id": "https://ec.europa.eu/programmes/horizon2020/"}
      },
      { "@id": "https://ec.europa.eu/programmes/horizon2020/",
      "@type": "FundingScheme",
      "name": "Horizon 2020" }
  ]
}
```

But note that http://schema.org/funder is not official, even though it is used in examples at Grant. Stian commented on this in https://github.com/schemaorg/schemaorg/issues/383#issuecomment-637521075

https://github.com/crs4/life_monitor/issues/11

https://github.com/workflowhub-eu/about/issues/10

https://github.com/crs4/life_monitor/blob/master/data/crates/ro-crate-cwl-basefreqsum/test/params.jsonld

https://docs.google.com/spreadsheets/d/1MBNye9xqXDAe2Q8uBtioY4-17J-vKV8UA_PNprSMAVY/edit