

TechRAP - TECHNICAL REPORT APPLICATION PROFILE

Table 1. The namespace used

Vocabulary	Namespace
bibo	http://purl.org/ontology/bibo/
dbo	http://dbpedia.org/ontology
dcite	https://schema.datacite.org/meta/kernel-4.1
dcterms	http://purl.org/dc/terms
fabio	http://purl.org/spar/fabio
foaf	http://xmlns.com/foaf/0.1
frapo	http://purl.org/cerif/frapo/
onco	http://opendata.dsi.uminho.pt/health/onco-schema
rdf	http://www.w3.org/1999/02/22-rdf-syntax-ns#
rdfs	http://www.w3.org/2000/01/rdf-schema
schema	http://schema.org
techrap	http://opendata.dsi.uminho.pt/techrap

Table 2. Constraints Matrices

Description: Technical report			rdf:type = http://purl.org/spar/fabio/TechnicalReport					Use: A report of a technical nature.		
Label	Property	Range	Value string	SES IRI	Value IRI	VES IRI	Related description	Cardinality	Type	Usage
Abstract	dcterms:abstract	L	Y	-----	N	-----	N	1..*	String	A summary of the resource.
Author	dcterms:creator	NL	N	-----	Y	https://orcid.org/	Author	1..*	IRI	The responsible for making the resource.
Conflit of Interest	onco:conflictOfInterest	L	Y	-----	N	-----	N	0-1	String	Conflict of Interest.
Coverage	dcterms:coverage	NL	Y	-----	Y	http://purl.org/dc/terms/TGN	N	0..*	IRI	Spatial region.
Date	dcterms:created	L	Y	http://purl.org/dc/terms/W3CDTF	N	-----	N	1	Date	Date of publication
Date of publication	dcterms:issued	L	Y	http://purl.org/dc/terms/W3CDTF	N	-----	N	1	Date	Date of formal publication of the resource.
Date submission	dcterms:dateSubmitted	L	Y	http://purl.org/dc/terms/W3CDTF	N	-----	N	1	Date	Date of submission of resource.
Edition	bibo:edition	L	Y	-----	N	-----	N	1	String	The edition of a document.
Final considerations	techrap:conclusion	L	Y	-----	N	-----	N	1	String	The subject matter of the content
Format	dcterms:format	NL	Y	-----	Y	http://www.iana.org/assignments/media-types/	N	1..*	IRI	The file format
Funding code	frapo:hasGrantNumber	L	Y	-----	N	-----	Project	0-1	String	A data property specifying the grant number of a grant provided by a funding agency.
Guidelines	techrap:guideline	L	Y	-----	N	-----	N	0-1*	String	Recommended action.
Has version	dcterms:hasVersion	NL	N	-----	Y	-----	N	0-1*	IRI	A related resource that is a version, edition, or adaptation of the described resource.
Identifier	dcterms:identifier	NL	Y	-----	Y	-----	N	1..*	IRI	An unambiguous reference to the resource within a given context.
Interested Group	dcterms:audience	L	Y	-----	N	-----	N	1*	String	A class of entity for whom the resource is intended or useful.

Note: NL- NL, L – L, Y – Yes, N – No

Description: Technical report				rdf:type = http://purl.org/spar/fabio/TechnicalReport				Use: A report of a technical nature.		
Label	Property	Range	Value string	SES IRI	Value IRI	VES IRI	Related description	Cardinality	Type	Usage
Is Version Of	dcterms:isVersionOf	NL	N	-----	Y	-----	N	0-1	IRI	A related resource of which the described resource is a version, edition, or adaptation.
Language	dcterms:language	L	Y	http://purl.org/dc/terms/ISO639-2	N	-----	N	1*	String	A language of the resource.
Legend	schema:caption	L	Y	-----	N	-----	N	0..*	String	Legend of an illustration or table
Licence	dcterms:rights	NL	N	-----	Y	http://creativecommons.org/	N	1	IRI	Rights held in and over the resource.
Pagination	bibo:pages	L	Y	-----	N	-----	N	1	String	Page range of a document.
Period of the report	dbo:period	L	Y	http://purl.org/dc/terms/W3CDTF	N	-----	N	1	Date	Period initial and final of report.
Process number	frapo:hasReferenceNumber	L	Y	-----	N	-----	N	0-1	String	A reference number for that item.
Publisher	dcterms:publisher	NL	Y	-----	Y	http://id.loc.gov/authorities/names.html	N	1..*	IRI	An entity responsible for making the resource available.
Purpose	techrap:isAbout	NL	Y	-----	Y	http://vocabularies.coar-repositories.org/documentation/resource_types/2.0.draft/	N	1	IRI	The purpose of this report is to project, research or equipment.
References	dcterms:references	NL	Y	-----	Y	-----	N	1	IRI	A related resource that is referenced, cited by the described resource.
Requesting institution	techrap:requestingInstitution	NL	Y	-----	Y	http://id.loc.gov/authorities/names.html	Institution	1*	IRI	Name of requesting institution.
Research Field	techrap:researchField	L	Y	-----	N	-----	N	1	String	Research domain.
Status	bibo:status	L	Y	-----	N	-----	N	1	String	Status of a resource.
Subject	dcterms:subject	NL	Y	-----	Y	http://id.loc.gov/authorities/subjects.html	N	1..*	IRI	The topic of the resource.
Summary	dcterms:tableOfContents	L	Y	-----	N	-----	N	1	String	A list of subunits of the resource
References	dcterms:references	NL	Y	-----	Y	-----	N	1	IRI	A related resource that is referenced, cited by the described resource.
Technical team	dcterms:contributor	NL	N	-----	Y	https://orcid.org/	N	1..*	IRI	An entity responsible for making contributions to the resource
Title	dcterms:title	L	Y	-----	N	-----	N	1..*	String	A name given to the resource.
Type	dcterms:type	NL	N	-----	Y	http://vocabularies.coar-repositories.org/	N	1	IRI	The nature or genre of the resource.
Type of access	dcterms:accessRights	NL	N	-----	Y	http://vocabularies.coar-repositories.org	N	1	IRI	Declares the degree of openness of a resource
Volume	bibo:volume	L	Y	-----	N	-----	N	1	String	Volume of a resource.

Description: Institution				rdf:type : http://purl.org/dc/terms/Agent				Use: An organization, establishment or foundation.		
Label	Property	Range	Value string	SES IRI	Value IRI	VES IRI	Related description	Cardinality	Type	Usage
Acronym	frapo:hasAcronym	L	Y	-----	N	-----	N	1	L	A data property linking an entity to an acronym used to identify it.
E-mail	foaf:mbox	NL	N	-----	Y	-----	N	0-1	mailto:IRI	The nature or genre of the resource.
Homepage	foaf:homepage	NL	N	-----	Y	-----	N	0-1	IRI	A homepage for organization.
Local	dcterms:coverage	NL	N	-----	Y	http://purl.org/dc/terms/TGN	N	1	IRI	Physical location of the item.
Name	rdfs:label	NL	Y	-----	Y	http://id.loc.gov/authorities/names.html	N	1	IRI	Name of Institution.

Description: Author				rdf:type http://purl.org/dc/terms/Agent				Use: A resource that acts or has the power to act.			
Label	Property	Range	Value string	SES IRI	Value IRI	VES IRI	Related description	Cardinality	Type	Usage	
Academic degree	dcterms:academicLevel	L	Y	-----	N	-----	N	1	String	A class of entity, defined in terms of progression through an educational or training context.	
Affiliation	schema:affiliation	NL	Y	-----	Y	http://id.loc.gov/authorities/names.html	Institution	0..*	IRI	An organization that this person is affiliated with.	
E-mail	foaf:mbox	NL	N	-----	Y	-----	N	0-1	mailto:URI	Personal mailbox.	
Identifier	dc:identifier	NL	N	-----	Y	www.orcid.org	N	1	IRI	An unambiguous reference to the resource within a given context.	
Name	foaf:name	L	Y	-----	N	-----	N	1	String	A name for something.	

Description: Research				rdf:type = http://purl.org/erif/frapo/Investigation				Use: An investigation is an endeavour that involves research, enabled by a project.			
Label	Property	Range	Value string	SES IRI	Value IRI	VES IRI	Related description	Cardinality	Type	Usage	
Analysis of results	techrap:outcomesAnalysis	L	Y	----	N	----	N	0..*	String	Interpretation of results.	
Data analysis technique	techrap:dataAnalysisTechnique	NL	Y	----	Y	http://id.loc.gov/authorities/subjects.html	N	0..*	IRI	A technique or procedure used to analyse the data.	
Data collection technique	onco:dataCollection	NL	Y	----	Y	http://www.ddialliance.org/Specification/DDI-CV/ModeOfCollection_1.0.html	N	0..*	IRI	The technique or procedure used to collect the data	
End data	schema:endDate	L	Y	http://purl.org/dc/terms/W3CDTF	N	----	N	1	String	Define the final date of project.	
Equipment	frapo:usesEquipment	L	Y	----	N	----	N	0..*	String	An object property linking an activity such as a research Project, to an item of equipment employed in that activity.	
Estimated duration	techrap:estimatedDuration	L	Y	----	N	----	N	1	String	To provide information on the duration of a research (weeks).	
Field activity	techrap:researchFieldActivity	L	Y	----	N	----	N	1..*	String	Field research activity developed.	
Findings	schema:result	L	Y	----	N	----	N	0..*	String	The result produced in the action.	
Funding code	frapo:hasGrantNumber	L	Y	----	N	----	Project	0-1	String	A data property specifying the number of a grant provided by a funding agency.	
Geographic location	dcite:geoLocation	NL	Y	-----	Y	http://purl.org/dc/terms/TGN	N	0..*	IRI	Named place where the data was gathered or about which the data is focused	
Impact	techrap:impactOfFindings	L	Y	----	N	----	N	1	String	The impact of the reported findings.	
Materials collected	techrap:materialsGathered	L	Y	----	N	----	N	0..*	String	Material collected during the research.	
Problems identified	techrap:hasIssue	NL	Y	----	Y	(developing)	N	0..*	IRI	Issue or problem identified during the research being reported.	
Research Field	techrap:researchField	L	Y	-----	N	-----	N	0-1	String	Resource field.	
Sample	onco:sampleSize	L	Y	----	N	N	N	0..*	String	The sample size.	
Intellectual publication	techrap:hasPublication	NL	Y	----	Y	----	N	0..*	IRI	Something that is produced as a result of that activity.	
Source	dcterms:source	NL	N	----	Y	----	N	0..1	IRI	A related resource from which the described resource is derived.	
Start data	schema:startDate	L	Y	http://purl.org/dc/terms/W3CDTF	N	----	N	1	String	Define the initial date of project.	
Status	bibo:status	L	Y	----	N	----	N	1	String	Status of a resource.	
Subject	dcterms:subject	NL	Y	-----	Y	http://id.loc.gov/authorities/subjects.html	N	1..*	IRI	The topic of the resource.	
Type o sample	schema:sampleType	L	Y	----	N	N	N	1..*	String	The sample type.	

Description: Project				rdf:type = http://xsls.com/foaf/0.1/Project			Use: A project (a collective endeavour of some kind)			
Label	Property	Range	Value string	SES IRI	Value IRI	VES IRI	Related description	Cardinality	Type	Usage
Activities plan	techrap:scheduledActivities	L	Y	----	N	----	N	0..1	String	Describes plan activity.
Agreement number	dcterms:identifier	L	Y	-----	N	-----	N	1	String	An unambiguous reference to the resource within a given context
Coordinator	techrap:hasProjectCoordinator	NL	Y	-----	Y	https://orcid.org/	N	1..*	IRI	Identification of the project's coordinator.
End date	schema:endDate	L	Y	http://purl.org/dc/terms/W3CDTF	N	-----	N	1	Date	Define the final date of project.
Estimated duration	frapo:hasTemporalDuration	L	Y	http://purl.org/dc/terms/W3CDTF	N	----	N	0-1	Date	Define the temporal duration of some entity such as an event or a project.
Funding agency	frapo:hasFundingAgency	NL	Y	-----	N	http://id.loc.gov/authorities/names.html	N	0..*	IRI	Funding agency that provides funding for it.
Headquarter	dbo:headquarter	NL	Y	-----	Y	http://purl.org/dc/terms/TGN	N	0..*	IRI	Headquarter of the organization responsible for the project.
Intellectual production	techrap:hasPublication	NL	Y	-----	Y	----	N	0..*	IRI	Something that is created or produced as a result of that activity.
Prediction	schema:scheduledTime	L	Y	http://purl.org/dc/terms/W3CDTF	N	----	N	0..*	Date	The time the object is scheduled to.
Problems Identified	techrap:hasIssue	NL	Y	-----	Y	(developing)	N	0..*	IRI	Issue or problem identified during the research being reported.
Project number	dcite:relatedIdentifier	NL	Y	-----	Y	-----	N	0-1	String	Identifier of related Project.
Project title	dcterms:title	L	Y	-----	N	-----	N	1..*	String	A name given to the resource.
Register number	frapo:hasProjectIdentifier	NL	Y	----	Y	----	N	1	IRI	A data property linking a project to an identifier for hat project.
Start date	schema:startDate	L	Y	http://purl.org/dc/terms/W3CDTF	N	-----	N	1	Date	Define the initial date of project.
Technical member	techrap:hasTechnicalMember	NL	Y	-----	Y	https://orcid.org/	N	1..*	IRI	Identification of the technical members of project.

Description: Note				rdf:type bibo:Nte			Use: A Nte about a Resource			
Label	Property	Range	Value string	SES IRI	Value IRI	VES IRI	Related description	Cardinality	Type	Usage
Author	dcterms:creator	L	Y	----	N	----	Author	1	String	An entity primarily responsible for making the resource.
Date created	dcterms:created	L	Y	http://purl.org/dc/terms/W3CDTF	N	----	N	1	Date	Date of creation of the resource.
Description	dcterms:description	L	Y	----	N	----	N	1	String	An account of the resource.
E-mail	foaf:mbox	NL	N	----	Y	----	N	0-1	mailto:IRI	A personal mailbox

Description: Equipment				rdf:type http://purl.org/cerif/frapo/Equipment			Use: An item of equipment or apparatus, or a laboratory instrument.			
Label	Property	Range	Value string	SES IRI	Value IRI	VES IRI	Related description	Cardinality	Type	Usage
Description	dcterms:description	L	Y	----	N	----	N	1	String	An account of the resource.
Trademark	dbo:tradeMark	L	Y	----	N	----	N	1	String	Registered trade mark.