

 CONSUMERS AS CREATORS: Understanding the annotation needs of the scientific community t										
ANNOTATIONS TOOLS ASSESSMENT <small>IMLS LG-87-18-0057-18 http://www.missouribotanicalgarden.org/plant-science/plant-science/consumers.aspx</small> <small>This project was made possible in part by the Institute of Museum and Library Services (LG-87-18-0057-18)</small>										
Priority (Must/Should)	Label #	Requirement	Hypothes.is	Recogito	Pundit (pro)	RERUM	RERUM	VIA (VGG image annotato	Annotorious	
1	Must	1.0	Easy-to-use responsive interface, simple and flexible. Make it easy to include annotations: 2-3 clicks process, have a dropdown list of controlled vocabularies, allow tagging with a URL.							Rerum does not include interfaces directly, but all the requirements can be fulfilled by a developer implementing the Rerum tools
		1.0.1	Easy-to-use	✓	✓	pundit but not pundit pro (semantic annotation)	N/A	N/A	✓	✓
		1.0.2	Responsive interface	✓	✓	✓	N/A	N/A	✓	✓
		1.0.3	Simple interface	✓ (just a chrome extension or a bookmarklet to use)	files need to be uploaded	✓ (just a chrome or mozilla extension or a bookmarklet to use)	N/A	N/A	✓	✓
		1.0.4	Flexible interface	depends	depends	✓	N/A	N/A	✓	depends
		1.0.5	Can include annotations with a 2-3 clicks process	✓	✓	✓	N/A	N/A	✓	✓
		1.0.6	Has a way to use controlled vocabularies in a dropdown list (entity recognition)	✓ in prototype	only for places	✓	N/A	N/A	?	?
		1.0.7	Recognizes a URL when typed	✓	✓	✓	N/A	N/A	✓	✓
1	Must	2.0	Keep a simple tool integratable (with a click of a button) with Zotero, Hypothes.is and other tools.				✓			Web Annotation compliance means the integration is only as complex as the API for the tool to be integrated, though none of these are automatically supported at this time.
		2.0.1	Integrates with a click with Zotero	✗ when hypothesis is active, zotero automatically deactivates	✗	✗	✗	✗	✗	✗
		2.0.2	Integrates with a click with Hypothes.is	N/A	✗	✗	✗	✗	✗	✗
		2.0.3	Integrates with a click with other tools	not with a click	Geonames	✗	✗	?	?	✗
1	Must	3.1	Annotations must be visible for non-users				✓			All reading from a RERUM store is open by default, so no authentication is needed to view, only edit
		3.1.1	The system must allow Annotations to be made visible for non-users (without a login). (public)	✗	✗	✗	✓	✓	✓	✗
		3.1.2	The system must allow Annotations to be made visible only for users with a login. (Registered)	✓	✓	✓	✓	✓	✓	?
		3.1.3	The system must allow Annotations to be made visible only for users in a specifically defined group (by including their username)	✗	✓	✓	✓	✓	✓	?
1	Must	6.0	Ability to highlight a target (text or image) by color-coding it, drawing a box around it.				N/A			Drawing the box is not part of Rerum, but saving the selector and annotation is completely supported
		6.0.1	Highlight a text (as text)	✓	✓	✓	N/A	N/A	✗	✗
		6.0.2	Highlight a region	✗	✓	✓	N/A	N/A	✓	drawing a shape around
		6.0.3	Highlight with different colors	✗	✓	✓	N/A	N/A	✓	different shapes but also color can be defined based on value of region attribute
1	Must	10.1	There will be at least 3 levels of sharing annotations: privately, with a group (members must be identified), and publicly (everyone). (See table below) There may be a need for more levels (for example: "only shared to registered users"). In order to promote sharing open annotations, they should be public by default, but the system will allow the user to configure its account settings to make all new annotations private, public or shared with a group by default. There should also be an option to indicate that you may want the system to ask you each time you annotate whether annotations are shared publicly, privately or with a given group.				✓			Rerum authenticates the application and the application can prefix that with any authorization scheme. Anything saved to the OngCDH RERUM repository is readable by default, but can be decorated with rights and use restrictio
		10.1.1	Can share annotations privately to a defined group	✓	✓	✓	✓	✓	✓	✗
		10.1.2	Can share annotations to users even if they are not logged in	✗	✓	✗	✓	✓	✓	✗
		10.1.3	Can share annotations only with registered users (with a login)	✓	✓	✓	✓	✓	✓	✗
		10.1.4	Configure account settings to share annotations by default in a particular mode (private, group, public-even non-users, registered, ask)	only private, group & registered	✗	✓	✗	✗	✗	✗
1	Must	11.0	Modification of annotation target & body must be allowed				✓			Rerum maintains a complete version history, so modification is not a problem
		11.0.1	Modification of the body is allowed	✓	✓	✓	✓	✓	✓	✓
		11.0.2	Modification of the target is allowed	✗	✗	✗	✓	✓	✓	✗
1	Must	12.0	Keep a log of activities of the system.				✓			Custom query reports can be designed for activities, logs can be annotated as part of an interface, or the application can maintain its own logs based on user events or the events broadcast from the DEER tool.
		12.0.1	The system maintains a log of the activities by users	✗	it records the history	?	✓	✓	✓	✗
		12.0.2	The log is visible by the users and admins	✗	✗	✗	✓	✓	✓	✗
1	Must	13.0	When creating annotations, the target could be a text chunk, an image or another annotation. Allow adding a tag in a specific place (region) within an image.				✓			Web Annotation compliance allows for any type of content, as long as it is identified.
		13.0.1	Annotate a text chunk (as text)	✓	✓	✓	✓	✓	✓	✓
		13.0.2	Annotate an image region allowing to place the tag in a specific place	✗	✓	✓	✓	✓	✓	✓
		13.0.3	Annotate another annotation	✓ as a reply	✓ as a reply	✓ as a reply of a comment	✓	✓	✓	annotations can be updated. Replaced but not annotated.
1	Must	15.0	All annotations are visible by default but can be filtered (e.g. by author, date, category, tags/terms, etc)				✓			Rerum encourages consistent typing of annotations which allows for filtering in the interface without much extra work.
		15.0.1	Annotations can be filtered by author or group	✓	✓	✓	✓	✓	✓	✗
		15.0.2	Annotations can be filtered by a date range	✗	✓	✓	✓	✓	✓	✗
		15.0.3	Annotations can be filtered by other criteria (category, tags/terms, etc.)	by user, tag, URL, group	by notebook	✓	✓	✓	✓	✗
1	Must	16.0	Annotations must be stored centrally but could also be cached locally.				✓			Specifically, Rerum doesn't prevent the caching.
		16.0.1	Annotations are stored centrally	✓	✓	✓	✓	✓	✓	✗
		16.0.2	Annotations are also cached locally	✗	✗	✗	✓	✓	✓	✓
1	Must	19.0	The system must be multi-platform.				✓			Multi-platform in that it is browser-based, so different OSes work fine and even desktop apps (like Electron) work.
		19.0.1	There are different versions of the program for different platforms or environments.	work as chrome extension or as booklet in other apps	✗	✗	✗	✗	✗	✗

		19.0.2	The same version of the program works in different platforms or environments.	an annotation made on a PDF version of a document — even on a local computer — can show up on an	Available as both a free GitHub (Java) download and an online hosted version.	only as chrome extension	✓		✓
1	Must	20.0	The system must allow to associate a licence with the annotation for any non-private use.		you can select the license		✓	The application is authenticated, but the application handles its own authentication externally.	
		20.0.1	A list of pre-defined licenses (CC-BY, CC0, etc) can be chosen	all public annotations are CC0	✓	✗	N/A		✗
		20.0.2	A configuration setting allows the user to specify what license should be used by default with each group	?	defined for each doc.	✓	N/A		✗
1	Must	21.0	Content creators must always be logged into the system, never anonymous				N/A	The application is authenticated, but the application handles its own authentication externally	
		21.0.1	The system must allow users to create an annotation only if they are logged in	✓	✓	✓	N/A		✗
1	Must	22.0	Only creators can modify (not delete) their own annotations, with the exception of administrators who can modify anyone else's annotations. If we allow edition, then we will need to link annotations to the different versions of the target (e.g. Google docs "resolve" functionality hides the old comment but its still there, not deleted).				✓	Rerum authenticates the application and the application can prefix that with any authorization scheme. Anything saved to the OngCDH RERUM repository is readable by default, but can be decorated with rights and use restrictions.	
		22.0.1	Other users can't modify annotations not owned by them	✓	✓	✓	✗		✗
		22.0.2	Annotations can be hidden (not deleted) by an administrator	?	✗	✗	✗		✗
		22.0.3	Annotations can be deleted by the creator if the annotation is not the target of any other annotations	✓	✓	✓	✓	all annotations can be deleted	all annotations can be deleted
		22.0.4	If editing, the system notifies authors of related annotations about the modification.	?	✗	✗	✗		✗
		22.0.5	The system allows to "resolve" an annotation, hiding all the thread of discussion.	✗	✗	✗	✗		✗
1	Must	25.0	The system must be able to manage controlled vocabularies/checklists (thesauri, taxonomies like IPNI for all plant names, the Plant List, WORMS, Catalog of Life, and ITIS; gazetteers, etc.) and allow the creation of list of values, lists of people (authors like IPNI for all plant author names like VIAF, collectors, illustrators, VIAF, etc.), traits like morphological terms (Stearn's "Botanical Latin") and Marine Species Traits, habitats from marineregions.org, WWF Ecoregions and habitat ontologies; "Taxonomic Literature" (Staffeu and Cowan) for author names and journal title abbreviations, ontologies (OBO Foundry, Plant Phenology Ontology, FLOPO, PO, Gene Ontology) and systems like Atlas Living Australia, EOL, Index Herbariorum and IPNI. This must be achieved by "registering" the controlled vocabulary (downloading locally or self building vocabularies) and make it available			Pundit allows open free text and restricted controlled vocabularies and taxonomies	✓	Rerum encourages fixed vocabularies and interfaces can decide how deeply to expose these to the user, based on the motivation for each annotation. DEER goes even further in supporting this relationship.	
		25.0.1	Must allow the user to load a controlled vocabulary by registering it in the system configuration	in prototype, allows controlled tags from a single dictionary, only one category is allowed	the only controlled vocabulary are places using Gazetteers	✓	✓		✗
		25.0.2	This should be achieved by "registering" the controlled vocabulary and make it available through the system	✗	?	✓	✓		✗
		25.0.3	A configuration feature allows to access and download the vocabulary globally in the system	✗	?	✓	✓		✗
		25.0.4	Admin Users must be allowed to self build vocabularies for the system	✗	✓	✓	✓		✗
		25.0.5	Must allow the user to traverse the hierarchy of terms to choose values from those lists, browsing or searching labels (for example: habitats like mangrove, tropical montane rainforest, paramo), equivalent names (synonymy) and taking into account their hierarchy: relations through time (species taxonomy, localities, etc.). In a system like Pundit, you should be able to choose predicates related to taxonomy in a semantic triplet.	✗	✗	✗	✓		✗
	Must	31.0.3	Search terms from a vocabulary in the (public/private) annotation bodies (and targets?) (See #25.0.5)	N/A	✗	✗	?		✗
1	Must	26.0	The system must allow the user to define topics (for example: using a hashtag sign #), create a reference to an entity, associate terms to an annotation, etc. This could be done using annotations of annotations (like GoogleDocs uses the comment "Resolved" and disappears the whole conversation if the last comment is of type "Resolved" but reappears it (and "unresolves" it) if a new annotation is added to the thread afterwards). Linking by adding URLs, replying or highlighting are different ways in the interface to input a certain type of annotation.	Allows links and images to be embedded			✓	Rerum does not include interfaces directly, but all the requirements can be fulfilled by a developer implementing the Rerum tools. Within RERUM, it is easy to mint new URIs for specific other entities.	
		26.0.1	Allow the definition of topics (by using a hashtag)	uses tags	uses tags	allows semantic tagging	N/A		allows definition of attributes
		26.0.2	Allow the creation of a reference to an entity (by using an @)	✗	✓	✓	N/A		
		26.0.3	Allows for annotations of annotations (nested annotations, i.e. to reply to a comment, to annotate an annotation)	Only as a reply of the whole annotation	✓	✓	N/A		✗
		26.0.4	Supports a discussion thread of annotations, allowing replying annotations. See 18.0.2	✓	✗	✓	N/A		✗
		26.0.5	The interface allows the user to link using an URL	✓	✗	✓	N/A		✗
		26.0.6	Highlight text and images	only text	✓	✓	N/A		
1	Must	27.0	Implement search functionality by keyword or type (comments/descriptions/customized tags/categories). Any references to entities within an annotation should be indexed and made searchable (for example: hashtag or @)				✓	The application interfaces can manage filtering of local data and Rerum API supports complex queries to find specific types of results.	
		31.0.6	Each existing annotation (be it a page, book, DL, Repository target) has a unique reference (URI) that allows access to it.	✓	✓	✓	?		✗
		27.0.1	Allow the user to search for a keyword	✓ only if tagged	✓	✓ in the Dashboard	✓		✗
		27.0.2	Allow the user to search a type of annotation: comments, descriptions, customized tags, categories	by tags, url or group	people, places, and events	search notebooks	✓		✗
		27.0.3	Any references to entities within an annotation should be indexed and searchable	✗	✓	✓	✓		✗
1	Must	33.0	The system must allow a user to filter the annotations by showing only those that came out in the current search result. (see # 15)				✓	The application interfaces can manage filtering of local data and Rerum API supports complex queries to find specific types of results.	
		33.0.1	Allow the user to filter the annotations (see # 15)	?	✗	✓	✓		✗
		33.0.2	Handle a current search result and allow operations only on filtered annotations	✗	✗	✓	✓		✗
1	Must	37.0	Different types of annotations should be allowed. For example: specimen reference, taxonomic name, habitat types, corrected text, geographic locations, authors (artist, collector, dates, determined by), notes, reviews, links (URL, URI, DOI, barcode), customized categorization, personalized vocabularies or (hashtags ("#interesting", "#evolution", "#new_method").				✓	Web Annotation compliance allows for any type of content, as long as it is identified	
		37.0.1	The system must allow for different types of annotations	comments, highlight & tags	just highlights and tags entities as a place, person or event	comments, semantic links to Web of data entities and fine granular cross-references and citations	✓		allows definition of attributes
		37.0.2	Types of annotations could be predefined in a configuration part of the system	✓	✓	✓	✗		✗
2	Should	4.0	Export different formats (text, image or Rich Text) compatible with existing products (Wikipedia, Flickr, Disqus, Wordpress, Pinterest, Zotero, Google Refine, Trove, Digital New Zealand, Smithsonian Transcription Center, Notes from Nature, VertNet, EOL, iNaturalist, AnnoSys, Tropicos, ADAM)				N/A	Exporting data to another format is not within the scope of Rerum because it creates a fork of the data that breaks the history. However, the useful URIs in Rerum can be linked	
		4.0.1	Export annotations as csv, txt, html, json	✓	✓	can be exported into other formats (by default they will be in ODT).	N/A		✓
		4.0.2	Export to other program's specialized format (MODS, BibTeX, RIS, etc)	✗	KML, TEI & GeoJSON	✗	N/A		✗
2	Should	5.0	System includes context of images (i.e the area surrounding the region chosen) when showing the result annotations of a search within a digital library (See 34.0 for the case within the repository below)			annotations can only be made in notebook hosted in the Pundit server	✓	All this information is available in a returned query.	
		5.0.1	System includes context of text when showing the result annotations of a search within a digital library (See 34.0.1 for the case within the repository below)	✓	✗	✗	✓		✗
		5.0.2	System includes context of images when showing the result annotations of a search within a digital library (See 34.0.2 for the case within the repository below)	✗	✗	✗	✓		✗

2	Should	7.0	Annotations should include also images and entity references in the text of the body, so the use of a Rich Text field is preferred when capturing the body of the annotation.						✓	Web Annotation compliance allows for any type of content, as long as it is identified. The DEER templates can make the rendering of known types simpler as well.		
		7.0.1	Images references can be captured in the body of the annotation and shown accordingly	yes, as a link	X	X			✓			X
		7.0.2	Entities references (other users, terms of a vocabulary, (hash)tags, etc.) can be captured in the body of the annotation and shown accordingly	X	✓	✓			✓			X
		7.0.3	Annotations (particularly comments) should allow text formatting by presenting options available (for example, a toolbar with italics for species names, bold for entities, etc.).	✓	X	X			N/A			
2	Should	9.0	Ability to print target with annotations (layout TBD, but should include PDF (text) and comments).						N/A	This would be a specific interface for the application, but it is very possible to implement. It is possible that DEER templates could be implemented that make this even simpler.		
		9.0.1	print annotations w/o target	✓	X	X			N/A			X
		9.0.2	print annotations with target	✓	✓	✓			N/A			✓
2	Should	11.1	Versions should be supported if the annotation target & body can be modified						✓	Core to Rerum: https://blog.ongcdh.org/blog/development/versioning-in-rerum/		
		11.1.1	Annotation body can be modified with version support	X	X	X						X
		11.1.2	Annotation target can be modified with version support (like/dislike)	X	X	X						X
2	Should	17.0	Annotations should be discoverable outside of the place where they were added (i.e. separate from the website or target)						✓	OngCDH's RERUM store holds all annotations publicly for reading.		
		17.0.1	There is an annotation repository and it is accessible	✓	X	✓						X
		17.0.2	The annotation repository is searchable	✓	X	✓						X
		17.0.3	The annotation repository allows to filter content.	X	X	✓						X
		17.0.4	The annotation repository allows to export content.	X	X	✓						N/A
		17.0.5	Store your online resources with annotations intact forever, regardless of whether the original source is still active (see Digo)	?	?	?						
2	Should	18.0	The system should support assessment of and reply to annotations and notifying of any changes in related annotations						X	Notifications are not a supported use case, but Rerum Inbox may cover these items.		
		18.0.1	Users should be able to assess annotations (like agree and disagree)	X	X	✓						X
		18.0.2	Users should be able to reply to annotations (See #26.0.4)	✓	✓	✓						X
		18.0.3	The system should notify users of any changes in annotations related to their own ones or annotations they have commented on.	✓	X	?						X
2	Should	23.0	Annotations should be flagged (e.g. as inappropriate or irrelevant) or for admin review. (e.g.Three-strikes-out: if three users report an annotation as in violation of the terms of use, it will be hidden).						✓	Web Annotation compliance allows for any type of content, as long as it is identified. Using flags locally or within RERUM is fine.		
		23.0.1	Annotations can be flagged (as inappropriate or irrelevant).	✓	X	✓						X
		23.0.2	Admin users can track flagged content	✓	X	✓				Moderating activities require moderation. Tagging is trivial to add, however.		X
2	Should	24.0	Any autocomplete functionality should be modifiable through the use account configuration, including writing URLs.						N/A	The interface can support autocomplete, but it is not clear what expectations this places on the Rerum tool.		
		24.0.1	The system should provide autocomplete functionality (related to 30.0.2 below)	X	X	X						X
		24.0.2	Converting URLs and handles (@, #) to actionable content can be activated or deactivated as desired by the user in the configuration of the system.	X	X	X						X
2	Should	28.0	The system should allow for validation of a target if it changes (e.g. if the page or sentence on page changes, as in replaced or deleted, we need to account for that and build in functionality to address that						Sort of	Notifications are not a supported use case, but the target can be extended for fuzzy selectors as in Hypothesis and Rerum Inbox may cover these items.		
		28.0.1	If the system allows for changes in the page, either by replacement of deletion, the system should validate the target.	?	?	?						X
2	Should	30.0	Allow annotations as frequently as required, creating efficiencies during the data input. (e.g. maintaining default values for each field configurable through the account setting).						✓	DEER extends this functionality as well.		
		30.0.1	The system should allow the admin to maintain configurable valid values for each field	X	✓ Place, person, event)	?						✓
		30.0.2	The system should be aware of patterns when filling up (autofill or autopopulate) any field in order to support optimization (related to 24.0.1 above)	X	Xautomatic and bulk annotations of people and places	X						X
2	Should	34.0	The system should allow searching annotations across the repository displaying the body and the target. The context of the target (i.e surrounding words of text chosen) should also be shown for contextualization.		No repository, only notebooks				✓	The application interfaces can manage filtering of local data and Rerum API supports complex queries to find specific types of results.		
		34.0.1	System includes context of text when showing the result annotations of a search across the repository (See 5.0.1 for the case within the DL above)	✓	X	X						N/A
		34.0.2	System includes context of images when showing the result annotations of a search across the repository (See 5.0.2 for the case within the DL above)	✓	X	X						N/A
2	Should	35.0	Filtering annotations on a digital library level or a book search result level should allow to write a text contained in the annotation or an entity referred to in the annotation like Author, categories and range of dates. For the awareness part, when showing the dropdown list of categories, the values would be followed by the number of annotations in that category in the Digital Library or the book search result; alternatively a balloon or status bar could indicate this when hover over or the field gets the focus when					only at the notebook level	✓	Web Annotation compliance allows for any type of content, as long as it is identified. Using flags locally or within RERUM is fine.		
		35.0.1	Filter annotations from a DL or book search result set by writing a text contained in the annotation	X	X	X						N/A
		35.0.2	Filter annotations from a DL or book search result set by entering an entity name (using @ #) referenced in the text of the annotation.	X	X	X						N/A
		35.0.3	Filter annotations from a DL or book search result set by Author (user, group), Categories (tags), range of dates.	X	X	X						N/A
		35.0.4	When showing the dropdown list in the field of categories while filtering annotations from a DL or book search result set, the category values would be followed by the number of annotations in that category in the Digital Library or the book search result	X	X	X						N/A
		35.0.5	Show a balloon or status bar indicating the number of annotations in that category in the Digital Library or the book search result when hover over the Category field or the Category field gets the focus when the user lands on it.	X	X	X						N/A
		35.0.6	When filtering annotations from a DL or book search result set, show a list of only authors referred in the annotations of this Digital Library or the current book search result.	X	X	X						N/A
		35.0.7	When filtering annotations from a DL or book search result set, using the creation and modification dates pre-fill the "From:" field with the earliest date and the "To:" field with the latest date of the annotations in the Digital Library or this current book search result.	X	X	X						N/A
2	Should	36.0	Filtering annotations on a book viewer level would show the categories used in the current book followed by the number of annotations of that category used in the current page and the number of annotations in that category used in the current book; alternative a balloon or status bar could indicate this when hover over or the field gets the focus when the user lands on it. The same with authors of annotations, they could be chosen from a list of authors of annotations in the current book followed by the					only at the notebook level	✓	Web Annotation compliance allows for any type of content, as long as it is identified. Using flags locally or within RERUM is fine.		
		36.0.1	Filter annotations on a book viewer level by writing a text contained in the annotation	X	X	X						N/A
		36.0.2	Filter annotations from a book viewer level by entering an entity name (using @ #) referenced in the text of the annotation.	X	X	X						N/A
		36.0.3	Filter annotations from a book viewer level by Author (user, group), Categories (tags), range of dates, or URL.	X	X	X						N/A
		36.0.4	The dropdown list in the field of categories while filtering annotations on a book viewer level would show the list of categories in the current book followed by the number of annotations with each category in the current page and the number of annotations in that category used in the current book. As in "Category X (## / ###)" or "Category Y (## of ###)".	X	X	X						N/A
		36.0.5	Show a balloon or status bar indicating the number of annotations in that category in a book viewer level when hover over the Category field or the Category field gets the focus when the user lands on it.	X	X	X						N/A

		36.0.6	When filtering annotations from a book viewer level, show a list of authors of annotations in the current book followed by the number of annotations of this author in the current page and then the number of annotations by this author in the current book.	X	X	X			N/A
		36.0.7	When filtering annotations from a book viewer level, using the creation and modification dates pre-fill the field "From:" with the earliest date and the field "To:" with the latest date of the annotations in the current page.	✓	X	X			N/A
3	Could	8.0	Annotations could be able to expand to more than one page if needed	✓	✓ only if annotation is a comment	✓ only if annotation is a comment	N/A	Paging and layout is the application's responsibility, but long annotations or lists are available in Rerum.	X
3	Could	10.0	The tool could also allow an user to read the annotations back from a PDF.				X	An interface could convert annotations from a PDF, but it is not in scope for Rerum to convert between offline file types.	
		10.0.1	Users could save annotations on PDFs hosted online.	✓	X	X			X
		10.0.2	Users could save annotations on PDFs hosted locally.	only if PDF is opened in a chrome or Firefox browser and when Hypothesis is activated	X	X			X
3	Could	14.0	An user could be able to see the versions of their annotations and they could be able to update. (When updating, the ID of the annotation will be kept the same but the last modification date will be updated and a new annotation related to the existing one	N/A	you can see the edit history	N/A	✓	Rerum easily exposes the history of annotations and objects.	X
		14.0.1	Users could be able to see the versions of their annotations	N/A					X
		14.0.2	Users could be able to update their annotations	only by editing an annotation or replying	only by editing an annotation	only by editing an annotation			✓
2	Could	24.1	Any autocorrection functionality should be configurable through the user account configuration.				N/A	The interface can support autocomplete, but it is not clear what expectations this places on the Rerum tool.	
		24.1.1	Users could turn on/off the autocorrection functionality as desired.	N/A (no autocorrection functionality)	N/A (no autocorrection functionality)	N/A (no autocorrection functionality)			X
3	Could	29.0	We need the functionality to allow for overlapping text and overlapping regions (e.g. 2 different users highlight the same text or image but with slightly different boundaries)	✓ (it indicates the number of annotations with overlapping target), it allows the same user and other users to do it.	✓	✓	✓	If the interface accommodates, overlaps are not problematic in Rerum	
3	Could	31.0	The system could contribute to make the user aware of other existing annotations that might be related. For example, by highlighting the number of annotations of the same category that the user is choosing for his annotation, allow to search free text or vocabulary terms, traverse annotations with context in a separate search results page and create a reference to existing	✓	✓	✓	✓	A combination of queries and queues in the interface make this possible to expose to the user.	✓
		31.0.1	The system shows hints about other existing related annotations (with summary numbers, colors, fonts, etc.)	✓	✓	✓			✓
2	Should	31.0.2	Search free text in the (public/private) annotation bodies (and targets)? See #27.0.1, #35.0.1 and #36.0.1	✓	X	✓			X
		31.0.5	Creates separate search results page that allows navigation between results	✓	X	✓			X
		31.0.7	Shows an aggregate or a heatmap for highlights of the same text by different annotators	✓	✓	✓			X
3	Could	32.0	While typing, the system could suggest the characters to type ahead by looking similar values in an annotations referenced from existing indexed terms. Autofill functionality (suggests words based on what you typed before) could use indexed terms stored in the DB or the browser support this and cache the values to service the look ahead function.				X	This is out of scope for Rerum, but is possible to accomplish in an application interface.	
		32.0.1	Type ahead functionality available	X	X	X			X
		32.0.2	Autofill functionality available	X	X	X			X
3	Could	38.0	Users could be able to duplicate an annotation or copy the body an annotation and paste it with a different target within the system or outside the system in other application (for example, like a citation in Zotero, or a comment in Google Docs, or a conversation in text or a table with targets (and context).				✓	Sort of... This is just Copy/Paste, so it is based on the browser and operating system, not any annotation tool, as described.	
		38.0.1	Allows to copy the body of one annotation into a different target in the system	✓	only if the annotation is a comment	only if the annotation is a reply			only if body is a free text
		38.0.2	Allows to copy the body of one annotation into a different target outside the system in other application	✓	only if the annotation is a comment	only if the annotation is a reply			only if body is a free text
3	Could	39.0	Setup a website to support the system. Allow for talk page.				unclear	I'm not sure what this means. Discussion-style annotations are easy, but "support the system" is hazy.	
		39.0.1	There is a website that supports the tool	✓	✓	✓			✓
		39.0.2	Have a talk page where users can share with other users. Supports workflows.	✓	✓ (under pelagios)	X			X
3	Could	40.0	Wiki'mize more by allowing users to add annotations while recording the history of changes (versioning) and relying on the power users (like groups' admins) to help out monitoring that and making the necessary corrections/verifying of the content.				✓	Core to Rerum: https://blog.ongcdh.org/blog/development/versioning-in-rerum/	
		40.0.1	Record the history of changes (versioning) while annotating (See #11.1.1)	X	✓	X			X
		40.0.2	Allow power users to become groups admins to moderate	X	✓	?			X
3	Could	42.0	When connection to the global repository is lost, the annotation could persist in local storage while the user is offline and global repositories could be synchronized (automatically if possible) with local storage as soon as connectivity is restored, managing conflict.					This is not built into Rerum, but it is on our roadmap and prototyped in Rerum Collection Management	
		42.0.1	The annotation should persist in local storage if the user is offline, and be persisted globally once the connection is re-established, synchronizing local and global repositories (automatically if possible). Synchronizing local and global repositories implies that, if I first change annotations while offline, then someone goes online on a second computer and changes some of these annotations as well and then I get online on the first computer, both versions should be automatically synchronized (when there is no conflict), otherwise allow the user to synchronize manually.	X	X	X		This is non-trivial as it would require an additional conflict resolution interface, which is a research tool beyond the annotation module you specified immediately. Rerumhave designed this for other projects, but it is out of scope for Rerum itself	X only local
3	Could	45.0	The system could allow collaborate editing of annotation vocabulary (a qualified user should be able to create new entries in a vocabulary if they do not exist)					This action is part of a discrete module. Without getting into details, the Rerum interface (DEER, for example) can load a dropdown with the terms from the fixed vocabulary, which can be hardcoded or set in another application and publicly hosted. OngCDH is doing this for the Religion in Place project and could show you something similar, if you like.	
		45.0.1	The system could allow the definition (and naming) of a group of users to assign privileges (See #25.0)	X	X	X			X
		45.0.2	Group tag dictionary feature to encourage tagging consistently within a group.	X	X	X			✓
		45.0.3	A qualified user could be able to create new entries in a vocabulary if they do not exist.	X	X	X			✓
3	Could	46.0	The tool could have tutorials for users (ideally a video)					Yes. Rerumhave some and regularly produce others, especially for specific interfaces.	
		46.0.1	The system could provide (contextual) help to the user on how to use it.	X	Some	X		This is interface (DEER or other, not Rerum Proper)	✓
		46.0.2	The systems could provide other support resources (like videos on "How to" and "Use cases")	✓ (video)	✓ (tutorial)	✓ (video)		This is interface (DEER or other, not Rerum Proper)	✓
3	Could	47.0	The tool could have tutorials for users (ideally a video)	X	✓	X		Yes. Rerumliterally wrote the recipe for this and have sample interfaces	X
1	Must	50.0	The system must be IIIF-compliant, being able to support images held in IIIF-compliant repositories (ie. the repository used (RERUM, Botanicus) should be IIIF-compliant)	?	✓	?		For all items in Rerum, it is capable of complete IIIF compliance. This means Presentation for us, since Rerumdon't host image resources.	✓
2	Should	51.0	The IIIF manifest should be made available and the annotations should be exported in a PDF, as a JPEG 2000 (Images) or as simple text	X	X	✓		Rerum makes Manifests available as JSON; we've created interfaces that convert this to plaintext, PDF, and HTML.	X