

# Functional Requirements

This document from the National Gallery of Art is intended to provide insight into the nature of a functional requirements document for readers who are unfamiliar with such material. Please note that the needs for each institution may vary widely.

#	Functional Requirement	Category	Notes	Priority
1	System shall allow user to click on a link associated with a content object or search result item to generate a preformatted scholarly citation that can be cut and pasted by the user	citation	Which content objects can be cited? Texts for sure. Images?	High
2	System shall allow user to choose the format of the preformatted content object citation that can be cut/pasted	citation	APA, MLA, Chicago/Turabian	High
3	System shall generate a preformatted content object citation in a structured format that can be imported by EndNote, Zotero	citation	BibTeX, MODS, Refer/BibLX, RIS, Zotero RDF	High
4	System shall generate as part of the preformatted citation, a persistent URL that links to the version of the content object being cited	citation		High
5	System shall generate citation links back to specific points in a given text content objects	citation	HTML anchor jumps	High

6	System shall send an automated e-mail to a registered user who has recorded a citation to one or more content objects that have been updated/replaced by a newer version	citation		Low
7	System shall allow user to select a view of a content element (for example, essay, biography, exhibition history, but not art object tombstone) that displays all of its previously published versions	content display	Only “substantive” changes would count. Should this include tombstone data?	Medium
8	System shall display a link to a page listing traditional front matter and back matter	content display		High
9	System shall provide ability to link from in-text bibliographic and footnote references to a National Gallery of Art (NGA) library system record when the NGA holds the referenced work or a WorldCat record when the NGA doesn't hold the referenced work	content display		Medium
10	System shall display citations, footnotes, and bibliographic references associated with SysCat texts	content display		High
11	System shall display texts marked up in a structured format in a manner that supresses visibility of tagging structure	content display	If XML, a DTD and CSS are required, if RDF, an ontology is required along with DTD and CSS	High
12	System shall display a link allowing users to view the XML/RDF structure of a text	content display		Low

13	System shall handle the UTF-8 character set in display and input of all text	content display		High
14	System shall display artist biography texts, object summaries, object essays, conservation technical notes, and introductory essays along with the following content items where relevant: endnotes, bibliography, digital images, comparative figures, author name(s), peer reviewed, object tomb- stone, provenance, exhibition history, inscription texts, publication date	content display		High
15	System shall display “related items” from other NGA information resources alongside biography and essay texts and technical notes	content display	For example, public web content, gallery shops, digital media	High
16	System shall display NGA artist and object metadata from TMS++ data source	content display		High
17	System shall display digital image metadata from DAM data source	content display		High
18	System shall allow user to display bibliographic lists of “works cited” and “history of scholarship”	content display		High
19	System shall display an inventory of all images available in the NGA DAM relevant to the displayed art object	content display		Low

20	System shall allow user to sort master bibliographic lists by the following attributes: author, "where cited," publication type (for example, book, journal article, year)	content display		High
21	System shall allow user to create a persistent personal user account that allows the user to save and name multiple "My Stuff" lists of content objects and searches	data export	Anything else they might want to save?	Low
22	System shall allow download of large NGA object images to user's local storage	data export	NGA objects only. Need to establish maximum size rule(s)	High
23	System shall allow export of a text file containing the metadata associated with one or more images	data export	For example, EXIF, XMP, MODS	Low
24	System shall allow user to export content objects and their related information as a PDF file formatted to display only relevant information and eliminating extraneous website navigation and design elements	data export		High
25	System shall allow user to save a PDF aggregation of the entire SysCat content as a single file formatted to display only relevant information and eliminating extraneous website navigation and design elements	data export		High
26	System shall automatically generate an OAI-style harvestable XML file containing all SysCat data	data export	What XML schema(s)? RDF/OWL?	Medium
27	System shall publish metadata harvestable by Google Scholar	data export		Medium

28	System shall allow download of the 1995 version of Dutch SysCat in PDF format	data export		High
29	System shall provide contextual help to users	help	Hovering over a function displays a pop-up short description/explanation (for example, "Export")	Medium
30	System shall contextually display definitions of technical terms	help		High
31	System shall allow user to zoom in and out of digital images	image display	What level of maximum zoom? NGA mother file size? Smaller?	High
32	System shall allow user to display zoomed/compared images against a gray, white, or black background	image display	12% gray	High
33	System shall allow user to zoom into images by increasing magnification of the object to allow inspection of the fine detail of images of NGA art objects	image display	Includes object photos, technical photos. Likely does not include comparative figures	High

34	System shall display an option for user to view detailed rights and reproductions information associated with a digital image. Information shall minimally include name of rights holder, contact info for rights holder, and copyright/copyleft/open source/creative commons specifications	image display	Anything else?	High
35	System shall allow user to compare NGA object images as singletons, pairs, trios, or quartets	image display	Thumbnail grid?	High
36	System shall display comparative figures and their captions inline within texts	image display		High
37	System shall allow for designation of prefabricated links available to users that preset areas/levels of zoom in photos	image display	For example, artist signature	Medium
38	System shall display a thumbnail overview of current x/y/z axis status of image zoom	image display		High
39	System shall allow two versions of an art object's images to be overlaid atop one another (for example, master object images on technical images), with the ability for the user to cross-fade or wipe from one image to another	image display		High
40	System shall export images with their headers minimally stocked with the following metadata fields in EXIF and/or XMP format	image export	What fields? Other formats?	Medium

41	System shall allow user to add a search or browse result item to be added to an "Export items" list that will persist the length of the browser session	personal data storage		High
42	System shall allow user to e-mail the list of "My Stuff" content items to an e-mail address and allow specification of a subject line and a body message	personal data storage		High
43	System shall use a print style sheet to allow user to print SysCat site pages. The style sheet shall suppress display of extraneous website navigation and design elements	printing		High
44	System shall allow field-based keyword searching of artist, title, date of birth and date of execution (of work), medium, essay texts, and so on	search/retrieval		High
45	System shall display, as the user types in the field-based form field, a drop-down suggestion list of available/potential field attributes	search/retrieval		High
46	System shall allow use of Boolean operators (and, or, not) in field-based search form via explicit operator selection fields	search/retrieval		High
47	System shall display as the user fills in field-based search form fields, an auto-refreshed calculation of the number of search results a user will retrieve based on the search criteria	search/retrieval		Medium

48	System shall index site content so as to facilitate retrieval of relevant results from a field-based search	search/retrieval		High
49	System shall display field-based search results by default with the most relevant results at the top of the list and descending in relevance	search/retrieval	Possible relevance factors: keyword frequency, phrase matching, and so on	High
50	System shall display 20 field-based or browse results per page by default	search/retrieval		High
51	System shall display paginated search results allowing the user to navigate forward and backward in both field-based or browse results	search/retrieval		High
52	System shall allow user choice to display 20, 50, or 100 field-based or browse results on a page	search/retrieval		High
53	System shall persist a user's selection of the number of field-based or browse search results to display per page throughout the user's browser session	search/retrieval		High
54	System shall persist display of a user's selection of multiple search results across paginated search result pages	search/retrieval	This facilitates selecting while perusing multiple result pages	High
55	System shall allow user to refine current search results by modifying the search criteria, the result being a subset of the original search results	search/retrieval		Medium



56	System shall track and display a list of the user's field-based searches performed in a given browser session	search/retrieval		High
57	System shall allow user to recall any field-based search previously performed in a given browser session by clicking on an item in the displayed list of previous searches	search/retrieval		High
58	System shall allow user to sort field-based or browse search results by clicking on headers of the result display	search/retrieval	Need to mock this up so we know what sort of handles to offer	High
59	System shall display the user's search string in context with the field-based search results	search/retrieval	For example, [TITLE]="%skate%" AND [ARTIST]="%averk%"	Medium
60	System shall allow administrative management of a synonym ring and/or authority file in support of field-based/browse search	search/retrieval		High
61	System shall use synonym ring and/or authority file to display alternative options for search criteria based on comparison of the ring/file to the search criteria input by the user in a field-based search	search/retrieval		High
62	System shall display a pop-up box preview of a search result item content element when the user hovers the mouse over the search or browse result item	search/retrieval		Low
63	System shall display the content object when a user clicks on a search or browse result item	search/retrieval		High

64	System shall allow user to filter field-based searches based on the type of content object they wish to search. The type sort list shall minimally include images and text object types	search/retrieval	Text object types, for example, synopsis, entry, exhibition history, provenance, bibliography, biography, endnotes	High
65	System shall allow user to specify “wider” in field-based search index terms selected from a controlled vocabulary resulting in results that include all of the “Broader than” terms associated with the applied index term	search/retrieval	Expands the result set by returning broader concepts	Low
66	System shall allow faceted browse searching	search/retrieval	Possible facets: artist, period, style, school, of-ness, about-ness, tag cloud, content object type	High
67	System shall allow user to click on links embedded in texts to initiate searches based on keywords contained within the link	search/retrieval		High
68	System shall allow user to generate a URL for linking back to any page displayed in the site	search/retrieval	Consider offering shortened URL for sharing links with others?	Medium
69	System shall support a technical interface with web services-based controlled vocabularies minimally including ULAN, AAT, TGN, ICONCLASS	search/retrieval		Medium
70	System shall display field-based search results that highlight the keyword terms in the displayed text	search/retrieval		Medium

71	System shall allow linking from a “works cited” bibliography record to a search result of all objects citing that record	search/retrieval	Consider option for showing individual essays in results of citation link	High
72	System shall provide a persistent link from a displayed object/artist to the public website view of the same object/artist	search/retrieval		High
73	System shall display a link on all SysCat pages back to the public website main collection search page	search/retrieval		High
74	System shall allow user to add and subtract browse search facets into the current or past browser search result	search/retrieval		Medium
75	System shall display a visual timeline of artists, works of art, and other world events. Clicking on an artist, work of art, or world event displays additional information	timeline		Low

## ACKNOWLEDGEMENTS

This report is drawn from extensive interviews with participants in the Online Scholarly Catalogue Initiative as well as conference presentations, summaries of convenings, and reports from grantees.

The Getty Foundation is grateful to everyone who participated in the shaping of this report, especially Holly Witchey, Kristin Kelly, and Anne Helmreich.