

REQ	FEATURE ID	Description
R1	DataManagement	Data management features group
R1.1	DM_SpatialDatabase	Existence of a Spatial Database Management System
R1.1	DM-SD_PostGIS	Using PostGIS (and PostgreSQL) as the DBMS
R1.1	DM-SD_MySQL	Using MySQL as the DBMS
R1.1	DM-SD_OracleSpatial	Using Oracle Spatial as the DBMS
R1.2	DM_DataServer	Existence of a service providing standard (non-spatial) data
R1.3	DM_DataInput	Data input features group
R1.3	DM-DI_DataFeeding	Data feeding features group
R1.3	DM-DI-DF_Shapefile	Importation of shapefiles: the user can load alphanumeric and spatial information from shapefiles into the application.
R1.3	DM-DI-DF_Raster	Importer of raster files
R1.3	DM-DI-DF_Network	Importer of network files
R1.3	DM-DI_Digitizing	Data digitizing features group
R1.3	DM-DI-D_Form	Digitizing from forms: the user can edit the geographic information of new or existing elements using a map within a standard form.
R1.3	DM-DI-D_Map	Digitizing from maps: the user can create batches of new geolocalized elements by drawing their shape on a map, and setting their alphanumeric data in a subsequent step.
R1.4	DM_Algorithmics	GIS procedures feature group
R1.4	DM-A_Connectivity	GIS procedures regarding connectivity feature group.
R1.4	DM-A-C_RouteCalculation	Route calculation from an origin and destiny points within a map.
R1.4	DM-A-C_NetworkTracing	Checking which nodes of a network can be reach from a determined node.
R1.4	DM-A-C_ConectivityCheck	Checking which nodes of a network are not connected.
R1.4	DM-A_Geolocalization	GIS procedures regarding geolocalization feature group.
R1.4	DM-A-G_Addresses	Geolocalization of textual addresses
R1.4	DM-A-G_Documents	Geolocalization of geographic named entities on textual documents
R2	GraphicalUserInterface	GUI feature group
R2.1	GUI_Menu	Standard menu with links and submenus grouping menu items
R2.1	GUI-M_Top	An horizontal menu placed in the top of the page
R2.1	GUI-M_Bottom	An horizontal menu placed in the bottom of the page
R2.1	GUI-M_Right	A vertical menu placed in the right side of the page
R2.1	GUI-M_Left	A vertical menu placed in the left side of the page
R2.2	GUI_Forms	Forms for visualization and editing of elements in the data model
R2.2	GUI-F_Editable	Capability of a form to modify the information of the associated instance
R2.2	GUI-F_Creatable	Capability of a form to create new instances of the associated entity
R2.2	GUI-F_Removable	Capability of a form to remove the currently loaded instance
R2.2	GUI-F-R_ConfirmationAlert	Showing a modal warning alert when removing an element in a form
R2.3	GUI_Lists	Lists of elements of data from the data model
R2.3	GUI-L_Sortable	Lists can be sorted by the user
R2.3	GUI-L_Filterable	Lists elements can be filtered by the user
R2.3	GUI-L-F_RowFilter	The filters are applied for each row/property of the elements listed
R2.3	GUI-L-F_BasicSearch	There is a field to make search over all properties of the elements listed
R2.3	GUI-L_LocateInMap	For elements which have a geographical property, there is a link so an user can view the same element within a map viewer
R2.3	GUI-L_ViewListAsMap	For elements which have a geographical property, show all the elements within a map viewer
R2.3	GUI-L_FormLink	There is a link for each element that leads to a form where the element can be edited
R2.4	GUI_StaticPages	There are some static pages defined by the analyst
R2.4	GUI-SP_Management	The static pages can be created, modified and removed from the final application
R3	MapView	Map viewer features group
R3.1	MV_MapServer	Cartography is got from an internal map server instead of using publicly available servers
R3.1	MV-MS_GeoServer	The map server used is GeoServer

R3.1	MV-MS_Deegree	The map server used is Deegree
R3.2	MV_Tools	All features related to map viewer tools
R3.2	MV-T_Pan	The map can be moved with the mouse, changing the portion of earth viewed
R3.2	MV-T_Zoom	The user can zoom in/out the map
R3.2	MV-T_ZoomWindow	The user can zoom directly to a rectangle draw with the mouse
R3.2	MV-T_Measure	There is a tool that allows to measure different things in the map
R3.2	MV-T-M_Distance	Distances between two points can be measured
R3.2	MV-T-M_Line	The user can draw a line and measure its length
R3.2	MV-T-M_Polygon	The user can draw a polygon and measure its area
R3.2	MV-T-M_MapElement	The user can measure an element shown in the map, i.e., a geographic property of an instance
R3.2	MV-T_Export	The current view of the map can be exported to a file so the user can download it
R3.2	MV-T-E_SetScale	The user can choose the scale of the map before exporting it
R3.2	MV-T-E_ShowLegend	The user can choose whether the legend of the map is shown or not in the exported image
R3.2	MV-T-E_DRM	The user can add DRM protection to the created file
R3.2	MV-T-E_Type	File types that the user can choose to download the map, in case that there is more than one
R3.2	MV-T-E-F_PNG	Current view of the map is exported as PNG
R3.2	MV-T-E-F_PDF	Current view of the map is exported as PDF
R3.2	MV-T-E-F_URL	A custom URL is created for the current view of the map
R3.2	MV-T_Filterable	Map elements can be filtered by the user
R3.2	MV-T-F_RowFilter	The filters are applied for each property of the elements listed
R3.2	MV-T-F_BasicSearch	There is a field to make search over all properties of the elements in the map
R3.2	MV-T_UserGeolocation	The map can show the position of the user, geolocating him
R3.2	MV-T_InformationMode	Instead of panning the map on click, information about the element clicked is shown in this mode
R3.2	MV-T_ViewMapAsList	Shows a list with the current elements of the map
R3.2	MV_ContextInformation	The map viewer shows information regarding the current state of the view
R3.2	MV-CI_Map	The Context Information window has a mini map showing the position of the current view within the whole map
R3.2	MV-CI_Scale	Adds scale information to the context information
R3.2	MV-CI_CenterCoordinates	The centre of coordinates of the current view are shown
R3.2	MV-CI_Dimensions	The context information shows the current dimensions of the map
R3.3	MV_LayerManagement	Layers of the map can be manipulated from within the map viewer
R3.3	MV-LM_Order	Layers of the map can be sorted
R3.3	MV-LM_HideLayer	Layers of the map can be hidden
R3.3	MV-LM_Opacity	Opacity of the layers can be set
R3.3	MV-LM_Style	Style of the layers can be set
R3.3	MV-LM_ExternalLayer	The user can add external layers to the map from a map server
R3.3	MV-LM_Clustering	Elements of the layers can be clustered, showing the number of elements when the zoom is out and the singular elements when the zoom is in
R3.4	MV_MapCenter	The initial view of the map can be set
R3.4	MV-MC_BBBox	The initial view of the map is set to an specific bounding box
R3.4	MV-MC_UserPosition	The initial view of the map is centred on the user's location
R3.5	MV_DetailOnClick	When the user click on the elements of the map, a popup with the element information is shown
R4	UserManagement	The web application distinguish between different types of users and handle access permissions
R4.1	UM_Registration	Users can be registered
R4.1	UM-R_ByAdmin	Users can be registered by the administrator
R4.1	UM-R_Anonymous	Anonymous users can register themselves
R4.1	UM_Authentication	Users can log in the web application
R4.1	UM-A_RememberPass	The users have the choice to remember the session so next time the load the web application they do not have to write the password again
R4.1	UM-A_RecoverPass	The users can recover their password if they forgot
R4.1	UM_AccountActivation	The user accounts need to be activated before the first log in
R4.1	UM-AA_ByEmail	The users activate their accounts by receiving an email with a link
R4.1	UM-AA_ByAdmin	The accounts can be activated by the administrator

R4.2	UM_UpdateEmail	The users can update their email
R4.2	UM_UpdatePassword	Users can change their password
R4.2	UM-UP_ByUser	Users can change password themselves
R4.2	UM-UP_ByAdmin	Administrator users are the only who can change passwords of users
R4.2	UM_UserProfile	Extra information for user accounts is stored
R4.2	UM_UserCRUD	Administrator can access to lists of users and create, edit and remove users
R4.3	UM_SecurityType	The type of security of the web application
R4.3	UM-ST_Session	Security is provided by HTTP sessions
R4.3	UM-ST_JWT	Security is provided by JSON Web Tokens
R4.4	UM_LDAP	The web application is linked to a LDAP, so users do not need to register but they can use their existing accounts in the LDAP

Table 2: Feature list