

## Attachment A. ISN Business and Functional Requirements

(Note: These requirements are subject to change during the Review, Analysis and Finalization of ISN SaaS Platform Design phase described in the RFP).

#	Category	Feature	Sub-Feature	Description	Roles	Phase
1.0.0	Authorization				*	
1.1.0		Authenticate		Every user must be able to authenticate using email and password for credentials	*	V1 Release
1.2.0		Reset Password		Every user must be able to reset password via temporary reset code send by email/sms to the user	*	V1 Release
1.3.0		Register		Every invited user must have ability to register with an account, choose credentials and reset psw key	*	V1 Release
1.3.1			Encryption	All personal/sensitive data should be encrypted, such as passwords if any, credit card information etc.	*	V1 Release
1.4.0		Log Out		Every user must login in order to use the application. The logout should be timed / configurable, but we should enable users to log out from the application too	*	V1 Release
1.5.0		SSO		Single Sign On capability using Google, O365	*	V1 OR V2
1.6.0		Authorization		Retrieve authorization config per authenticated user	*	V1 Release
2.0.0	Data Management				Super Admin   Admin	
2.1.0		Geography		Manage geography components and hierarchy for global reusability and GIS interoperability.	Super Admin	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
2.1.1			Top-Level Geography	Geographical Areas are defined by a super admin at the platform level. These areas are not defined as community residing areas, nor should they be considered as "regions" (regions are used to define community residing areas).	Super Admin	V1 Release
2.1.2			Sub-Level Geography	Administrator(s) of an invited community will manage sub-levels of Geography definitions such as Observational Areas, Vantage Points (where an observer is located) and Views (the area that an observer is looking at). Observation areas are areas where observations are conducted by a community. Vantage point is an exact geo-location with longitude and latitude of where observations are expected to take place. The actual observation may take place near or at the vantage point. Views are a further definition of where and how observation took place defining direction, angle and distance to the object of the observation.	Admin	V1 Release
2.2.0		<b>Communities</b>		Manage communities and their hierarchy for global reusability	Admin	V1 Release
2.2.1			Admin Invitation	Super Admin invites community Admin by sending email and invitation code with a link.	Super Admin	V1 Release
2.2.2			Community Member Invitation	Admin invites community members by sending email and invitation code with a link. A member is assigned with a Supervisor, Observer or Citizen role.	Admin	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
2.2.3			Report Flag	Invited members may be flagged for access to enable him/her to run reports. Same applies to cross-community invited members. This allows "flagged" members to run reports even if the role assigned does not automatically allow running reports.	Admin	V1 Release
2.2.4			Cross-Community Invitation	An Admin may invite other Admins, Supervisors, and Observers from other Communities and allow them access to community resources with the same or different role - A community member with Observer role in one community may be invited to another community and have Supervisor role assigned. Same applies to any other available role including Admin, Supervisor and Observer roles.	Admin	V1 Release
2.2.5			Researcher Invitation	Super Admin invites organization Researcher by sending email and invitation code with link.	Super Admin	V1 Release
2.2.6			Expert Invitation	SuperAdmin/Admin invites Expert by sending email and invitation code with a link.	Super Admin   Admin	V1 Release
2.3.0		<b>Program / Study Categories</b>		Manage Program/Study categories for global reusability. To be defined in collaboration with TGSPI. An example of Program Categories are: Wildlife Observations, Environmental Observations. Study categories are more structured and deeper but an example for Wildlife Observation Program would be Fish & Wildlife and Vegetation where Fish & Wildlife may be broken down further into Mammals, Marine Mammals, Fish, Birds etc. while for Environmental Observations Program we could have Physical Environment, Pollution, Weather etc. as study categories.	Super Admin	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
2.4.0		<b>Observation Focuses</b>		Manage Observation Focuses for global reusability.	Super Admin	V1 Release
2.5.0		<b>Policies</b>		Manage definition of Policies for global reusability. Policies define how data can be shared amongst communities and with external users and should be modular for different data types (e.g. weather data may be more freely shared while observer data may be anonymized or redacted).	Super Admin	V1 Release
2.6.0		<b>Report Configurations</b>		Manage first layer of report configuration for queryable fields pertaining to a report type, based on Program/Study category and Observation Focus	Super Admin	V1 Release
2.7.0		<b>Protocols</b>		Manage reusable protocols by creating a short-text version of them as well as uploading appropriate PDF files for a full version protocol.	Super Admin	V1 Release
2.8.0		<b>Third Party Requests</b>			Super Admin	V1 Release
2.8.1			Data Access Requests	Management of new "members" requesting data access (study/global).	Super Admin	V1 Release
2.8.2			Training Signups	Management of training signups.	Super Admin	V1 Release
2.9.0		<b>Billing Management</b>		Management of billing aspect for Data Access Requests, Training Signups, new Members etc. access to budget reporting.	Super Admin	V1 Release
3.0.0	<b>Studies</b>				Super Admin   Admin   Researcher   Supervisor   Observer   Citizen	

#	Category	Feature	Sub-Feature	Description	Roles	Phase
3.1.0		Studies		Study creation workflow for Organization by a Researcher is simplified to where a study created by it, simply sends a request to communities for acceptance/refusal of their involvement into the study. Keep only one role (Researcher) at the Organization. When creating a study we should enable sharing it as public study at community only or at the network (across platform users). Also, add an option to enable/disable comments on the Observations.		V1 Release
3.1.1			Study Programs	Select a Program to associate with the study by filtering programs by program category. Program management enables users to create, modify and archive/reactivate Programs.	Admin   Researcher	V1 Release
3.1.2			Study Data	Manage core Study data (name, description, timeline, category, observation focus etc.).	Admin   Researcher	V1 Release
3.1.3			Study Expected Params	Define parameter expectations as range or exact values to be used in the validation process.	Admin   Researcher	V1 Release
3.1.4			Study Incentives	Define study incentives and/or budget if any. It should include exact rules on how the incentive is going to be applied to all parties involved.	Admin   Researcher	V1 Release
3.1.5			Study Protocols	Define protocols to be used in conducting this study.	admin   Researcher	V1 Release
3.1.6			Study Recipients	Manage primary and secondary data recipients of the Study data.	Admin   Researcher	V1 Release
3.1.7			Study Geography	Define a geographical area where the study will be conducted by selecting vantage points or by choosing hierarchical geography structure defining geographical and observational areas.	Admin   Researcher	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
3.1.8			Study Communities	The system will automatically filter communities related to a selected geography for the study. The end user will have the ability to include all communities or select one or more communities by a choice to include in the study. The system will create a Study Invite for a community that will be either accepted or refused by a community Admin.	Admin   Researcher	V1 Release
3.1.9			Study Observers	Upon accepting to become a part of the Study, a community Admin will have the ability to either announce the study as community-wide study (including Citizens & Observers), or either pick a selected group of Observers or include all Observers to conduct study observations. Same principles apply if the Study is created by an organization (Researcher).	Admin   Researcher	V1 Release
3.2.0		<b>Community Report Options</b>		Set configuration related to LTK, Observer Data and Sample Data (if applicable) for sharing.	Admin	V1 Release
3.3.0		<b>Study Invite Workflow</b>		When a community is invited to become involved in conducting the Study, a community Admin may accept or refuse the invitation. A creator of a Study sets up modules and public/private access to them. A community Admin may NOT change the initial setup except for predefined segments of data such as Observer Personal Data, Traditional Knowledge and Sample Data, but only simply accept/refuse the invitation	Admin	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
3.4.0		Study Data Structure		<p>This will be further defined during the final design phase as the required data architecture is established. An example of data structure includes Study Info, Observer Info, Micro-Environmental/Geo-Spatial Data, Observation Data etc. Core study information such as name, description and date(s) should be public by default. Observer data is controlled by an Admin of the involved community.</p> <p>Micro-Environmental/Geo-Spatial data may be marked as either a public or private data by the creator. Observation data is the core value so it may be private or public as well. Sub-sections of Observation data such as LTK are controlled by an Admin of the involved community. The creator of the study will have the ability to mark certain modules as private or public. Invited parties may either accept or deny their involvement, but not modify or request modification of any module privacy/access.</p>	-	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
3.5.0		Study Templates		A study created may be saved as a template and reused by the creator. If a creator decides that the study template is applicable for global use and reusable, the request must be made to the Super Admin to approve it. If approved, the template owner becomes Super Admin. Also, a template saved by the creator may be shared with another person/community only. As the access is given to a third party, as the third party accepts it, a clone of study configuration will be created and associated with a third party account. That way, each party will have their own version of the template. Global templates cannot be modified except by a Super Admin but even this operation is not recommended due to the possibility of affecting existing studies and observations associated with it. This may work best if there is version control of templates at the platform level.	Super Admin   Admin   Researcher	V1 Release
4.0.0	Observations			Observations will be set at the Study level with ability to add comments to the observations or not.	Observer	
4.1.0		Data Synchronization		Observer will authenticate into the system and synchronize data. Data to be synchronized with the local storage on the phone is related to Studies where Observer/authenticated user is referenced. This includes optional sync of PDF protocol files for each Study that is being synchronized.	Observer	V1 Release

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4.2.0		Offline Draft		Observers have the ability to create an observation draft without authentication (offline). All data will be stored at the local storage, flagged as "ready to sync"	Observer	V1 Release
4.3.0		Data Push		The device should run a simple logic of checking for internet connectivity and reliability. As the conditions are met, an alert is created to notify the user(s) about Offline Drafts that should be synced. Once the user accepts, the data is synchronized with the cloud database. Validation of expected parameters is executed as a part of this process, marking data fields that need to be corrected, prompting for explanation if the value is out of range.	Observer	V1 Release
4.4.0		Draft Update		Once the data is synchronized with the cloud, drafts can be retrieved and viewed on a computer. Marked fields for correction and/or prompt to collect additional information/explanation will be displayed as "actions" the Observer should address. Upon correcting and providing necessary information, data will be re-validated. If correct, the draft is ready for uploading additional files. An observation may be removed by an Observer if needed but the initial record of creation will remain in the ledger database (if used - ultimately this is a change in the status of a record, not a physical deletion).	Observer	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
4.5.0		Micro-Environmental Data		This proprietary data must be either entered by an Observer using means of measuring values by instruments (temperature, humidity etc.) or at the point of updating draft, by integrating with a third party "weather" service API for retrieving data. This has a downside of not necessarily being correct for a given observation geolocation but rather wider area related. The system should flag this data as "approximate" vs "exact" based on retrieval through 3rd party API or actual measurements at geolocation.	Observer	V1 Release
4.6.0		Observation Files Upload		Files such as images, videos or audio will be uploaded. The limit on size should be defined as well as types of files. If more file types are allowed, we will need to consider running software with auto-conversion functions to convert non-web/mobile friendly type files into a "friendly" type.	Observer	V1 Release
4.7.0		Quality Control Request		When all data is correct and all files are uploaded, a draft is ready to be submitted to a Quality Control workflow.	Observer	V1 Release
5.0.0	Quality Control				Admin   Supervisor   Expert	
5.1.0		QC Workflow		View list of pending QC Requests and have ability to review data. If quality is met, approve it, otherwise deny with additional request - send notification to the Observer to correct it. This flow will go between Observer and Supervisor until quality is met. As needed, an Expert can be invited and given temporary	Admin   Supervisor	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
				access to the data/observation for review.		
5.2.0		Expert Invite		Invite an expert to a specific study/observation to help with review. Create requests and enable temporary access to the data. Invite is sent via email/sms.	Admin   Supervisor	V1 Release
5.3.0		Expert Review		Invited experts will be able to review data and confirm / reply to a request with comment. A reply will go back to the Supervisor for final review and approval.	Expert	V1 Release
6.0.0	Data Access Policies			The policy is automatically applied to the Study based on privacy and involved parties in conducting the observation.	Admin   Researcher	V1 Release
6.1.0		Approval Workflow		The creator of a Study will be automatically involved in approving the access to it. Also, depending on how many Communities may be involved in conducting a study, a single additional party will be involved in the approval process OR a list of selected parties in case of multiple parties involved in conducting a Study. This is all defined by Policies and use-cases)	Admin   Researcher	V1 Release
7.0.0	Announcements & Notifications				Super Admin   Admin   Researcher	
7.1.0		Announcements		Different types of announcements starting from Super Admin announcing something to all Community Admins. An Admin announcing something community-wide (all members) or targeting specific "role" type members such as Supervisors or Observers.	Super Admin   Admin	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
7.2.0		Notifications		Notifications to Observers primarily occur as push-type notifications initiated by either a Community Admin or a Researcher. Additionally, we should enable Researcher to send notifications to a Community Admin in case of a communication need	Admin   Researcher	V1 Release
8.0.0	Reports			Supervisor and Observer may run reports only if they're flagged by an Admin for that functionality. A Super Admin may flag an Admin or a Researcher with ability to run Global-type reports across multiple studies with specific and public type of data spanning larger geographical areas throughout the time period for data.	Super Admin   Admin   Researcher   Supervisor *   Observer *	
8.1.0		Study Data Reports		Predefined configuration with query options, allows users to create and print out reports. A focused report is the user's ability to select specific fields of interest and run a report that way.	Super Admin   Admin   Researcher   Supervisor *   Observer *	V1 Release
8.2.0		Audit Log Reports			Super Admin	V2 Release
8.2.1			By Study	Log report by a specific study	Super Admin   Admin	V2 Release
8.2.2			By Program	Log report by a specific program	Super Admin   Admin	V2 Release
8.2.3			By Community	Log report by a specific community	Super Admin   Admin	V2 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
8.2.4			By User	Log report by a specific user	Super Admin   Admin	V2 Release
8.3.0		<b>Sharing Reports</b>		A user should be able to save and share configuration of a report with other users for reusability. It makes sense that a saved configuration is shared with users who have access to the same data and role/flag that allows them to run reports. Must do a check before completing action	Super Admin   Admin   Researcher   Supervisor *   Observer *	V2 Release
8.4.0		<b>Budgeting Report</b>		Type of report that Super Admin can run on memberships and/or Data Access Fees (percentage they make)	Super Admin	V2 Release
8.4.1			Data Access Fees	If the business model allows for platform owners to take a percentage off of any data access fees, then we need to have additional report or combine this aspect into the main Budgeting Report	Super Admin	V2 Release
8.5.0		<b>Data Access Budgeting Report</b>		This is a report that allows Admins to run and review money earned from Data Access Fees by third parties	Super Admin	V2 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
8.6.0		Report Layout / Style		Reports will use StyleGuide defined by the platform for non-specific community type reports (Study Data Reports, Audit Log Reports run by Super Admin while if they're run by an Admin they can be more styled for that community), and Budgeting Reports. Other reports such as Data Access Budgeting Report that is run by an Admin can be styled more for a specific community, as well as Audit Log Reports run by an Admin. For the Layout at least on the Study Data Report, the Header of each page should contain ISN Logo and Name, while Footer should have ISN contact information. The first page of a report will list a Study, who created it (Logo, Name, Contact Information) and who conducted the observations (list of communities involved with their logo, name and contact information)		V1 Release
8.7.0		Data Visualization		Data should be represented as tables and graphs. No need to enhance maps with highlighted areas, pins, polygons, etc. since the data will be exported to a GIS system.	Super Admin   Admin   Researcher   Supervisor *   Observer *	V1 Release
8.8.0		Data Export		Data should be exportable as excel and/or csv as well as GIS shape files or GeoJSON files GIS interoperability.	Super Admin   Admin   Researcher   Supervisor *   Observer *	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
8.8.1			GIS Interoperability	Data should be exported as GIS shape files or GeoJSON files GIS interoperability, including selected polygon map data and proprietary data associated with selected area.	Super Admin   Admin   Researcher   Supervisor *   Observer *	V1 Release
8.9.0		Querying Area		Ability to select an area for a report you're running should be done in two ways. 1) By selecting values from dropdown lists going through a hierarchy of dependent dropdown lists, selecting Geographical Area then Observational Area and Vantage Points (unnecessary to go all the way to the deepest layer but rather optional - a user may select only Geographical Area or stop at Observational Area only). The Observational Area is a list as well as Vantage Points. UI/UX should account for the proper structure and easy navigation and selection process. 2) By using a map and drawing a polygon on it which will automatically include all Observation Areas and/or Vantage Points within the polygon and therefore filter for data associated with the selected area. A sub-option of #2 would be to allow users to zoom in and select Vantage Points only with the ability to define radius around them as a means to define a wider area.		V1 or 1-A Release
9.0.0	Dashboards					
9.1.0		Super Admin Dashboard		View generated for Super Administrators	Super Admin	

#	Category	Feature	Sub-Feature	Description	Roles	Phase
9.1.1			Import Data Component	Create interface allowing Super Admin to import allowed format document and run import process of data from a third party resource.	Super Admin	V1 Release
9.1.2			Program Global Template Management Component	Enables super administrators to manage global, public programs reusable by all. This component should also list requests by Admin for making their public program global. If approved the owner of the program "record" becomes Super Admin and the program becomes a reusable "template".	Super Admin	V1 Release
9.1.3			Study Global Template Management Component	Enables super administrator to manage global, public study templates reusable by all. This component should also list requests by Admin for making their study a reusable global template. If approved, the owner of the study template becomes Super Admin and the study template becomes a public/global and reusable "template".	Super Admin	V1 Release
9.1.4			Community Management Component	Enables super administrators to invite communities to the platform by inviting an Admin of a community. Also, allows for archiving and reactivating community membership/involvement with the platform.	Super Admin	V1 Release
9.1.5			Invoicing Component	Enables super administrator to view pending payments, failed payments and/or manage invoices as well as create reports from it (payments, budget/money etc.).	Super Admin	V2 Release
9.2.0		<b>Admin Dashboard</b>		View generated for Administrators	Admin	
9.2.1			Members Component	Allows Admin to manage members of the community as well as invite them. Cross-community members are also included.	Admin	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
9.2.2			Program Management Component	Enables administrators to manage programs for a community. A program may be private or public (default). If private, all studies under the program should automatically be private also. If a program is public (default) then it should be reviewed by a Super Admin for approval to become global - if approved modification is allowed only by SuperAdmin while Admin loses its privileges to modify a globally public program.	Admin	V1 Release
9.2.3			Study Management Component	A component allowing Admin to create and manage existing studies, view and search through history etc. If a study is submitted for a review (global use, template) the Admin loses its privileges to modify this study template once approved by a Super Admin.		V1 Release
9.2.4			Study Resources Component	Enables an admin to upload any additional resources pertaining to a Study. These files will be in Excel or PDF format. Images/Videos can be uploaded as well but they must be in a web/mobile-friendly format (.mov typically used by clients but should be converted to .mp4 while for images we will use .jpg). <b>Possibility of using a third party service to convert .mov to .mp4</b>	Admin	V1 Release
9.2.5			Quality Control Component	Control list of pending QC Requests and have ability to review data. If quality is met, approve it, otherwise deny with additional request - send notification to the Observer to correct it. This flow will be controlled by Admin or Supervisor until quality is met. As needed, an Expert can be invited and given temporary		V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
				access to the data/observation for review.		
9.2.6			Expert Invitation Component	Control invitations to experts to a specific study/observation to help with review. Create requests and enable temporary access to the data. Invite is sent via email/sms.		V2 Release
9.3.0		<b>Supervisor Dashboard</b>		View generated for Supervisor role	Supervisor	
9.3.1			Quality Control Component	Control list of pending QC Requests and have ability to review data. If quality is met, approve it, otherwise deny with additional request - send notification to the Observer to correct it. This flow will be controlled by Admin or Supervisor until quality is met. As needed, an Expert can be invited and given temporary access to the data/observation for review.		V1 Release
9.3.2			Expert Invitation Component	Control invitations to experts to a specific study/observation to help with review. Create requests and enable temporary access to the data. Invite is sent via email/sms.		V2 Release
9.4.0		<b>Observer Dashboard</b>		View generated for Observer role	Observer	
9.4.1			Drafts Component	View of pending drafts, not submitted for quality control process. It allows users to review / modify draft as well as upload proprietary files for it before submitting it for the quality control review process. Returned requests with need for more clarification and/or additional actions are also marked on this component inline with actual observation	Observer	V1 Release
9.5.0		<b>Community Dashboard</b>		View generated for Citizen role based on shared components	Citizen	V2 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
9.6.0		Shared Dashboard Components				
9.6.1			Active Studies Component	Pre-filtered by personal preference a list of active studies for a user to preview. Opens up preview of study information and leads to Observation list / preview. Also, include publicly shared "network" studies from other communities. Users should be able to set preferences for interest and studies should be filtered by those interests.	Admin   Supervisor   Observer   Citizen	V1A Release
9.6.2			Active Observations Component	A list of active observations related to pre-filtered Studies only. User preferences apply to Observations too. This applies only to public studies within a community or a network - private studies will have private access to Observation Data module so they should not be shared/displayed publicly	Admin   Supervisor   Observer   Citizen	V1A Release
9.6.3			Observation Comment Functionality	This is a sub-feature of Active Observation Component allowing user to comment on active observation only if the Study configuration enabled comments for observations, otherwise this feature should be disabled	Admin   Supervisor   Observer	V2 Release
9.6.4			Announcements Component	This component applies to public as well as specific roles. The content is filtered based on the type of announcement that's created towards a specific role.	Admin   Supervisor   Observer   Citizen	V2 Release
9.6.5			Quality Control Component	Create interfaces allowing Supervisor to view a list of pending quality control requests. It should open up preview of data observed and allow Supervisor to approve/deny (respond back to the	Admin   Supervisor	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
				Observer with an additional request for clarification or similar).		
9.6.6			Expert Invitation Component	Enables Supervisor to invite an Expert with reason of confirming, reviewing etc. certain aspects of observation data / study. Should define exact study and observation (if applicable) so the invited expert has access only to specified records.	Admin   Supervisor	V2 Release
9.6.7			Profile Configuration	Each user should be able to configure profile settings for types of news/observations/interests etc. that they would like to see on the dashboard.	*	V2 Release
10.0.0	Imports				Super Admin	
10.1.0		Import Data		Import data from existing resources. For example from existing datasets from projects conducted outside of ISN, or "rematriated" data housed by an academic institution or agency collaborator that will be returned to a Tribal community or organization.	Super Admin	V1 or 1A Release
10.1.1			Define Import Format	Analyze data structure and define a format that would be required for data import functionality.	-	V1 Release
10.1.2			Build Import Logic	A logic that takes data in Import Format, parses it and imports into the database	-	V1 Release
10.1.3			Create Converters by Resource	Analyze data formats and create converters for each resource as needed in order to convert existing format and map it to predefined Import Format. Expectations are set for 5+ outside resources	-	V2 Release
10.1.4			Analyze Imported Data	Run analysis on imported data; test	-	V2 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
11.0.0	Invoicing System			TBD depending on whether an open source model, fee for services model, or a hybrid structure is used.		V2 Release
11.1.0		Credit Card Information		Depending on the final design specifications (TBD) , if the ISN SaaS platform incorporates automated payment processing, then we need to keep credit card information saved in the database (encrypted of course, and never pull that information to the UI, use it only on the server). If we're not doing automated processing then we must implement an invoicing system to create and send invoices for membership and other (study, shared data etc.) fees combined or we separate and do membership upfront with past month other type fees. Either way, the combination will create an invoice that is sent to the client via email/sms. It will be displayed on their dashboard as well. The client will have a grace period and due date for payment. Payment can be processed through the UI (integration with Square or similar) and the CC information will be provided by the customer at the time of the payment. The advantage to this approach is that we don't have to worry about encryption and safety of CC information in our DB; no need to follow PCI requirements	*	V2 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
11.1.1			Encryption	In case that CC information is saved in the database the full number must be encrypted. If we are doing 100% automated payment processing then we might need security code as well (encrypted). If we're not doing automated processing then we need to keep track of transaction only and in that case we need to save only last four of a CC card that was used	*	V2 Release
12.0.0	<b>Polls &amp; Surveys</b>				Super Admin   Admin	
12.1.0		<b>Google Forms</b>		Use Google Forms for this functionality. If possible, integrate with the system. Data collected through poll or survey should be imported as an additional resource to the Study if applicable, otherwise this data should be completely separate from study data but still searchable by the user who created it	Super Admin   Admin	V2 Release
13.0.0	<b>Marketing Website</b>			The Marketing Website will be developed and maintained separately by TGSPI. However the following components may need to integrate with the ISN platform for searchable data types and access request processing.	User	

#	Category	Feature	Sub-Feature	Description	Roles	Phase
13.1.0		<b>Public Searchable Data</b>		For a third party a very basic information about programs, studies and type of focuses for collecting data should be available for a public (non-registered entity) to search. By allowing this type of access/search capability we expect those parties who are interested in getting full access to a specific study data, to use this as a starting point to request access to data of interest. This should probably be a page/functionality of a Marketing Website. Also, we should allow scientists or organizations that have interest in let's say micro-environmental data only (specific data segment) but more related to a wider area, rather than specific study, to request "global" type access to specific "public" data. The request goes to Super Admin for approval	User	V1A Release
13.1.1			Study Data Access Request	Request made by a party interested in specific study	User	V1A Release
13.1.2			Program Data Access Request	Request made by a party interested in program data including all studies	User	V1A Release
13.1.3			Global Data Access Request	Request made by a party interested in specific data segment but spread out across multiple studies and areas	User	V1A Release
13.2.0		<b>Browser Compatibility</b>		Web application/portal should be compatible with Google Chrome, Safari and Firefox	-	V1 Release
13.3.0		<b>Privacy Policy   Terms &amp; Conditions</b>		Any user should be able to access Privacy Policy as well as Terms & Conditions as a viewable/downloadable PDF file. This applies for marketing website as well as for the Application.	*	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
13.4.0		Purchase Membership		Any user that wants to use the platform, should purchase a membership or if an open source model is chosen, invited to make a donation to ISN. Marketing website should be used as a gateway to a workflow / UI that will allow users to select and purchase membership or make a donation (whether we register user and then ask for purchase/donation or we complete purchase first and then redirect user to registration workflow). Different types of membership access should be determined by TGSPi. <b>This will impact "authorization rules" for logged in users and hide/show certain sections and/or functionality from different types of user independent on their role (based on the customer and membership type purchased or donation made).</b>	*	V2 Release
13.5.0		Training		It will be important to create a Knowledge Base, FAQ and training documentation with videos to provide training opportunities for new customers. The finalization of the design will determine which components are located on the ISN platform and which are located on the Marketing Website.	*	IMPORTANT FOR V1 Release
13.5.1			In Person Training Sign Up	Provide an interface with functionality to enable users to sign up for In Person training. Since the ISN platform specifications do not include calendar functionality, this should be a simple request that is either displayed on the Super Admin Dashboard and/or send email/sms to the appropriate person as a notification of request. The user must be able to pay or make a donation for	*	V1A Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
				in-person training following the same principles as when registering and establishing membership (payment/donation processing option).		
<b>14.0.0</b>	<b>Mobile App</b>					V1 Release
<b>14.1.0</b>		<b>Device Compatibility</b>		Mobile app should be device agnostic and effectively compatible with iOS and Android (e.g. most recent 3 devices/OS if functionally appropriate).	-	V1 Release
<b>14.2.0</b>		<b>Feature Goal</b>		Mobile app should be built using the same API/backend but extract features that are specific for the Observer role.	-	V1 Release
<b>14.3.0</b>		<b>Offline Use/Sync</b>		Mobile app will be used offline in most cases, but will require auto-check for internet connection checking for reliability of connection as well. If connection is available and reliable, the app should check for "draft" observations and prompt the user to sync the data with the cloud. The user may delay the sync or execute it. If executed, the draft data is synced with the cloud.	-	V1 Release
<b>15.0.0</b>	<b>Database</b>					V1 Release
<b>15.1.0</b>		<b>Backup &amp; Recovery</b>		Database should be backed up on schedule and have the ability to recover if needed.	-	V1 Release
<b>15.2.0</b>		<b>Capacity</b>		Should be able to save 300+ customers and hundreds of studies/observations per customer.	-	V1 Release
<b>16.0.0</b>	<b>Hosting</b>					
<b>16.1.0</b>		<b>Environments</b>		Must have a development, staging and production environment.	-	V1 Release

#	Category	Feature	Sub-Feature	Description	Roles	Phase
16.2.0		<b>Speed</b>		Must perform at the industry standard speed.	-	V1 Release
16.3.0		<b>Monitoring</b>		Include monitoring features to alert administrators and customers for any downtime.	-	V1A Release
16.4.0		<b>Performance Dashboard</b>		Dashboard with performance of a platform, graphic visualization etc.	Super Admin	V2 Release
17.0.0	<b>AI Recognition</b>	*do not include in estimate		To be evaluated as a separate phase-based project to train AI Recognition (e.g. images of plants or animals), then include it behind the scenes and not display results to the end user, until we're happy with the capabilities and accuracy. Integrate with the platform once satisfied with quality and precision	-	V3 Release
18.0.0	<b>BeringWatch Platform Conversion</b>			Current functionality and data must be effectively absorbed into the new ISN Platform	-	Required For V1 Release
18.1.0		<b>BeringWatch Data Import</b>		All data currently stored in the BeringWatch/ISN database must be imported into the new platform (currently 25,000+ observations).		Required For V1 Release
18.2.0		<b>BeringWatch Mobile apps conversion</b>		The functionality of the current mobile apps must be replicated as study templates on the new pl		Required For V1 Release