

## **IIIF Implementation Questionnaire**

So you want to implement IIIF--that's great! You may also feel the need for some guidance on how to get started. That's where this questionnaire can help. You can use this to learn more about IIIF while gathering information for yourself that you'll need in order to implement IIIF in a way that's best for your organization.

The community is growing fast, as are the options for implementing the various IIIF specifications for different levels of technical proficiency and architecture. Knowing where to start may feel a bit overwhelming, but that's OK.

The community has developed solutions that will work for you. The following questions will help guide you and your consultant in thinking through what will be the best solutions for your institution. As you read through and answer the questions you will also be given some background for why the questions are important and implications for how to proceed.

The final questionnaire (but not your answers to questions!) will be shared. Please help us improve this guide by sharing any questions that may come up, or if you think of something that hasn't been asked but may be relevant to the topic. This questionnaire is a work in progress and we want to improve it for use by the growing IIIF community. Your contribution to this instrument now will help others who follow along later.

The questions are in the order you would need to consider for developing the policies and deploying the IIIF technologies. To start we'll ask some about your institution, the people who work there, and your current technical approach and infrastructure. Then we'll get to the IIIF specific parts. We'll start with images, move on to presenting those images, and then cover search inside and authentication.

Each piece builds on the next. If a section or question does not apply to you can just add a "n/a" to let us know. For example, you won't have a need for search or authentication if you don't already have some images available online.

OK, let's get started.

### ***Initial Questions***

Before we get started it will be helpful to answer some high level questions.

What goals do you hope to achieve by adopting IIIF? What are your expectations for the outcome of this work?

What examples of IIIF have you seen that are inspiring to you?

If your museum does website user research, what user personas have you developed?

### **Major Systems**

To help orient us, we'd like information on the major systems you are using. Let us know the names of any products you use from vendors or open source projects. Include URLs if handy.

Add the version number if possible.

- 1) What image server are you currently using?
- 2) What collection management software are you currently using?
- 3) What digital asset management system are you using?
- 4) What content management system are you using for your web presence?
- 5) Do you have near term plans or operations in progress to change any of these platforms?  
If so, please list the target platforms and details about the migration schedule and progress to date.
- 6) Are you currently using HTTPS to serve your web content?
- 7) Do you currently have a institution specific search feature? And if so, how is it implemented or what is the underlying software? Is it different internally and externally?

## ***People & Capacity***

To best advise on the direction you might take, we need to know about the people involved. There are lots of choices for components like image servers so one factor for making a decision may involve current people, capacity, and skill set.

Do you have IT staff who can deploy and maintain servers and applications? Please describe.

Do you use cloud-style services to host content for you? Which ones? (This could range from hosted servers in the cloud -- Amazon Web Services or Linode -- to user facing software as a service like WPEngine.)

Do you regularly deploy software yourself or contract out deployment and maintenance to another organization?

Do you have programmers on staff? If so, who will be doing the technical implementation? What are their skills? What operating systems and programming languages are they most familiar with?

Do you have IT policies which prohibit or require specific operating systems, programming languages, databases or other parts of the technology stack. If so, what are they?

Is there organizational buy-in for IIIF? Who are the main stakeholders for this work? How do their expectations differ from yours?

Who sets policy on public access to your digital resources?

## ***Images***

Before IIIF, there were any number of different patterns for serving images. You may already have an image server that works for serving images to your own site(s). You may have limited choices in what viewers and other tools you can use with your image server. Others who want to use your images may be able to figure out how to work with your images, but it probably isn't clear.

One of the goals of the IIIF Image API is to create a standard for making image requests. Serving up images using the IIIF standard aids in interoperability and sharing. Interoperability allows you to choose from different means of delivering your images and image tiles. You can choose

various viewers for deep zoom functionality. When you share your images others also have a choice of the tools they use to view them. These may be different tools than you make available but better fit their needs. It is impressive what becomes possible and easy once you are serving up images using the IIIF standard.

Following are some questions to help us understand how you currently create and distribute your images.

## **Image Policies**

First some non-technical questions to help us understand your policies and institutional culture regarding sharing and reuse of your images. What you can do with your images will help determine how you do it.

Do you currently make any of your images available online to the public? What are some example public URLs for web pages that include images?

What barriers do you see to allowing your images to be published online?

Do you make high resolution versions of your images available for viewing and scholarly use?

Do you or will you need to restrict access in any way to particular images? Will you need to restrict access to high resolution versions of any of your images? What are your reasons for needing to restrict access? (Copyright? Donor restriction?)

What rights statements do you commonly use? Are you using [rightsstatements.org](http://rightsstatements.org)?

If some of your images require users (external or internal) to log in for access, what authentication system are you using?

## **Access Image Creation**

Large images can load slowly. That's the reason for tiling deep zoom viewers. Sometimes you may want to have an image fit a design more exactly to save on download size for the same reason.

Do you pre-compute images of various sizes to serve different uses? Are you generating any static images to fit the design of your site? If so point to some pages with representative examples of the images.

Are you creating static image tiles for a deep zoom viewer?

What access/derivative formats do you currently create?

Do you store height and width of your access images externally from the image itself?

Do you watermark access images?

Do you already create JPEG2000 images or have experience with JPEG2000?

What is your workflow for creating access/derivative images?

How do you use digital images within your exhibits?

What are your curators' needs for digital image resources? How do they currently get the exact

image they want for different uses?

## **Image Infrastructure**

Do you currently have an image server capable of dynamically serving up tiles for a deep zoom viewer?

Approximately how many requests are made for images every hour or day?

Do you implement any caching or load balancing for delivering your images?

## **Presentation**

While the IIIF Image API allows you to request particular images or regions of individual images, you need to implement the Presentation API if you want to display and share multi-image resources like the front and back of a painting, all the pages within a book or multiple photographs of an artifact. Even for a resource with a single image, there are benefits for reuse and sharing in adopting the IIIF Presentation API. You'll probably want to have a IIIF compatible image server in place, though, before diving into the Presentation API. In addition to images, the Presentation API also allows for displaying presentational metadata and structural information. If you deliver an image with the Image API alone it comes with no additional information or context to help the viewer understand it. Even no title.

The metadata included in the presentation API is designed to be presented to end users within their image viewers, so is necessarily simple and public facing.

The key piece of the Presentation API is the "manifest". A manifest pulls together various pieces of information exclusively for presentation to a user.

The Presentation API may look complicated, but you can get started simply and get lots of immediate benefits. Over time you may want to enable more features in viewers. You can iteratively improve your manifests, so it isn't necessary to do everything at first. The following questions will help us define your strategy for implementing the presentation API.

What information do you have about each of your resources? Please provide data exports for a small set of sample items.

Do you have structural metadata about your multi-image resources? (Viewing order, for instance.) Note that you can always begin without structural information and add it later.

While there are common image servers for delivering images using the Image API, in most cases each institution's environment differs enough that there are no shared applications for creating and managing Presentation manifests. Different approaches can include writing manifests by hand, generating static manifests files from your data that are served when requested, and dynamically generating manifests when requested. This is an area where vendors can help or where custom development may be necessary. The following questions will help us determine possible paths for you.

Where do you store descriptive metadata about your resources?

How can you get descriptive information about your resources out of these systems?

## **Presentation Extras**

With its focus on presentation of resources to users, the Presentation API purposefully does not try to deliver or expose all of the different kinds of data you might have. For instance, in different domains there are different metadata standards. Agreement on these kinds of standards can be difficult so IIIF avoids the issue by focusing on common needs for presentation. Below are some questions for common types of data you may have that could be added to a Presentation manifest and shared with others.

Do you have any textual resources? Do you have any OCR data? What formats of OCR data do you have? Do you make any OCR data available to users?

Do you have any descriptive metadata that you might make available to the public? What standards do you use? What formats (XML, JSON) do you use?

What other types of data may you want to deliver to users for reuse or make them aware of via your manifests?

## **Annotations**

Annotations are additions to manifests that expand on the information available to a viewer. People are currently using annotations to display user comments, transcriptions, translations, and links to related resources. Think of annotations as making statements about an image or a region of an image. These statements may just be identifying the object or commenting on it.

Do you have any data that might lend itself to being used as annotations? Is the data region specific? Is this data that is useful internally to curators or externally to scholars and the public? For instance, do you have notes about regions of a painting that have had damage or conservation activities?

## **Search Inside**

If you have textual resources, it can be useful to allow users to search inside a single resource. For instance, if you have OCR generated text, the Content Search API is a standard way to provide search within.

Designed to serve the needs of newspaper repositories, the Content Search API is not intended for discovery of resources or for searching the metadata. It is useful if you have access to the full text of the resource and want to allow someone to search for words and phrases, displaying search results as highlights on the page image.

Here's an example of content that has this search inside feature enabled.

[https://d.lib.ncsu.edu/collections/catalog?f%5Bfulltext\\_bs%5D%5B%5D=true&f%5Bispartof\\_facet%5D%5B%5D=Nubian+Message](https://d.lib.ncsu.edu/collections/catalog?f%5Bfulltext_bs%5D%5B%5D=true&f%5Bispartof_facet%5D%5B%5D=Nubian+Message)

Do you have any text resources with the full text of the page images available?

Do you currently have search inside functionality enabled for these resources? If so please share an example resource.

Is content search a feature that you would like to implement? What kind of priority would you give to this feature?

### ***Other Formats***

While the beginning of IIIF has been in images, some viewers do have experimental support for formats like video, audio, and 3D objects. There are current and will likely be future opportunities to be involved in adding support for these other formats to IIIF.

We'll want to see if there are areas that as we're planning for your implementation we might consider how these other formats would fit into your workflows and infrastructure to make it easier to add these formats in the future.

What other formats do you have that you will be wanting to share?

Do you have audio or video content?

**You're done! Thank you!**