Using Agile Methods & Tools for Collaborative Collections Projects and Organizational Development

Galadriel Chilton, galadriel.chilton@yale.edu
Director, Collections Initiatives
Ivy Plus Libraries Confederation, USA

In this article, Galadriel Chilton, the Director of Collections Initiatives (DCI) for the Ivy Plus Libraries Confederation (IPLC; a partnership of 13 academic libraries), shares examples of applying Agile principles and tools. Galadriel describes how using Agile coupled with intentional focus on establishing governance and communication processes helps effectively complete projects, build trust, cultivate community, and develop an organization.

Figure 1: Ivy Plus Libraries Confederation

Introduction

In the past six years, the DCI has managed multiple projects using Agile principles that concluded on time and under budget and is currently managing pilot project for collaborative print acquisitions. By sharing examples of project design and practices for effective and efficient outcomes, this research illustrates how multidisciplinary project teams enhance diversity of expertise and institutional representation. Coupled with discrete project components and distinct project teams, each component may lead to mission-fulfilling progress towards the partnership's collaborative collection development strategic priority. For each project, applying an iterative and flexible Agile mindset to the project's management, is key.

Adaptations of Agile components and processes to the management of the following projects include:

- *Collective Collection Analysis Dataset Feasibility Study* which tested methods for how the IPLC partnership works together and how they deduplicated monograph holdings records from 6 institutions with different integrated library systems.
- *Analysis for Collaborative Collection Development* which built upon the feasibility study by deduplicating holdings from all 13 partner institutions, compared holdings to usage, and created a model for how many copies of a monograph are needed to meet user needs.

- *Definitions & Concepts for Diversity, Equity, Inclusion, and Antiracism for Collaborative Collection Development* where the project team drafted terms to inform the partnership's collaborative collections work.
- *Collaborative Book Collection Program Pilot* where the project team applied the result of the Analysis for Collaborative Collection Development project to a coordinated print acquisitions process.

About the Ivy Plus Libraries Confederation (IPLC)

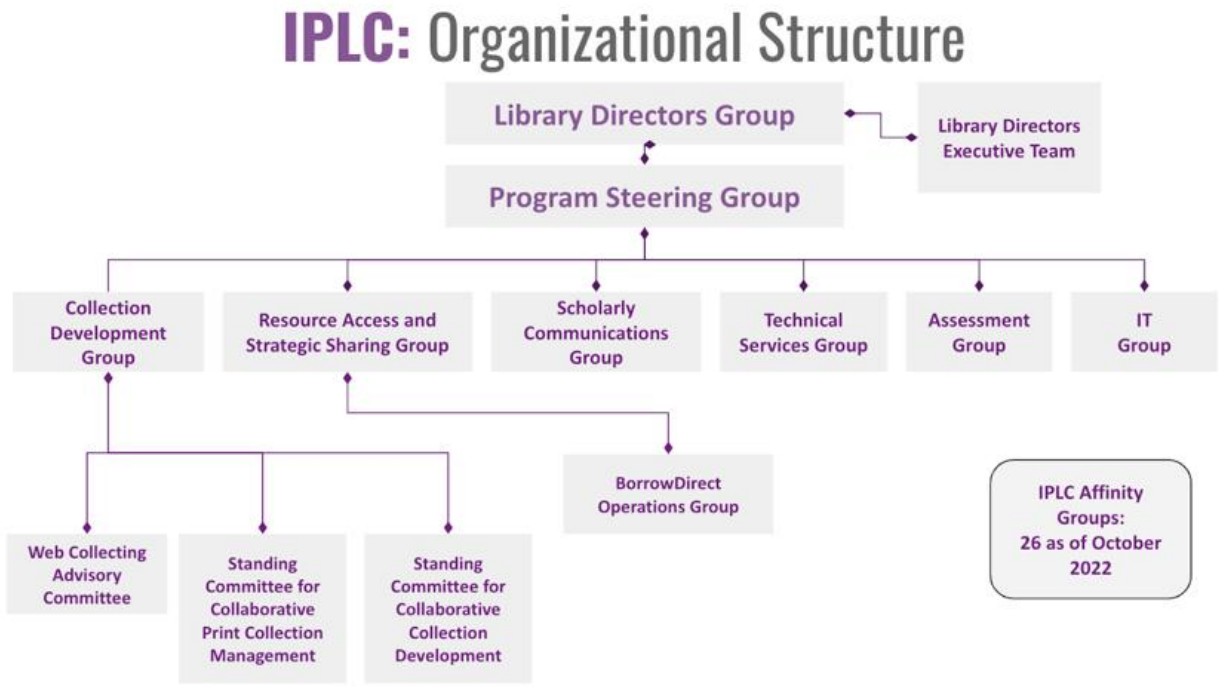

Figure 2: IPLC Organizational Structure

IPLC is a voluntary union of 13 sovereign academic libraries in the United States: Brown University, the University of Chicago, Columbia University, Cornell University, Dartmouth College, Duke University, Harvard University, Johns Hopkins University, the Massachusetts Institute of Technology, the University of Pennsylvania, Princeton University, Stanford University, and Yale University.

Per their mission, IPLC "leverages [their] collective assets to improve discovery of and access to information, and its innovative use at scale for the creation of new knowledge, and exercises action and leadership in helping shape the discourse around scholarly communication, and the outcomes of that discourse."

IPLC's three strategic priorities are:

1. Collaborative Resource Sharing & Discovery
2. Collaborative Collection Development & Management of Collections
3. Collaborative Leadership to Change the Scholarly Communication System

Comprised of different groups, IPLC's Library Directors Group overseas the partnership. There are also 6 key groups – collections, assessment, technical services, IT, scholarly communications, and resource sharing – working in fulfillment of the partnership's strategic priories. Additionally, there are 26 affinity groups that operate as communities of practice.

Reporting to the Library Directors Group, the Program Steering Group includes representatives from each of the 6 key groups, as well as a representative from one of the affinity groups. The Program Steering Group is responsible for building community and identifying and stewarding initiatives that require the expertise and knowledge from multiple or all the 6 key groups as well as the affinity groups as needed.

Cultivating Community

In her nearly 7 years with IPLC, the DCI has observed that there are foundational elements required for a community to thrive and for successful collaboration when it comes to cultivating community and collaboration. These are: trust, governance, communication, kindness, and network (or community) with "trust" noted most frequently.

In their 2002 article, "A Pedagogy of Trust in Higher Learning, Teaching", Curzon-Hobson notes that "...trust is a fundamental element in the pursuit of higher learning for it is through a sense of trust that students will embrace an empowering experience," (p. 266) and that "...without this sense of trust, the dialogical learning experience will be restricted…" (p. 276).

Given that projects in libraries are often about learning, without trust the learning experience and work in our organizations will also be restricted.

Furthermore, when it comes to project management, recognizing the "planning fallacy" is also necessary when working to establish governance, communication, kindness, and trust-building for a project team.

As Tim Herrara writes "There's a 'predisposition of humans to underestimate the time it takes to complete a thing called the planning fallacy, which leads us to overcommit to opportunities at the expense of actually completing them' said Greg McKeown, author of Essentialism… 'It's so deep in us,' he said, 'you can know about it and even understand the principle, and you'll still do it'" (Herrara, T.).

In the case studies below, the author exemplifies how Agile techniques help with governance, trust, communication, and the planning fallacy.

Project Vocabulary & Definitions

First, terms and definitions that are foundational for the remainder of this article, are given in the context of managing projects, cultivating community, and developing an organization:

1. A **project** is a "temporary endeavor undertaken to create a unique product, service or result" (Project Management Institute). If it's not temporary and unique, it's not a project.

2. Next is the author's own definition of **project management**: *humans* working, collaborating, and communicating together to apply their diverse and collective knowledge, skills, tools, and techniques to project tasks to complete the requirements of a time-bound project.

3. **Agile** is "relating to or denoting a method of project management, used especially for software development, that is characterized by the division of tasks into short phases of work and frequent reassessment and adaptation of plans," and "**agile project management** divides responsibility among more than one team member" (Mountain Goat Software).

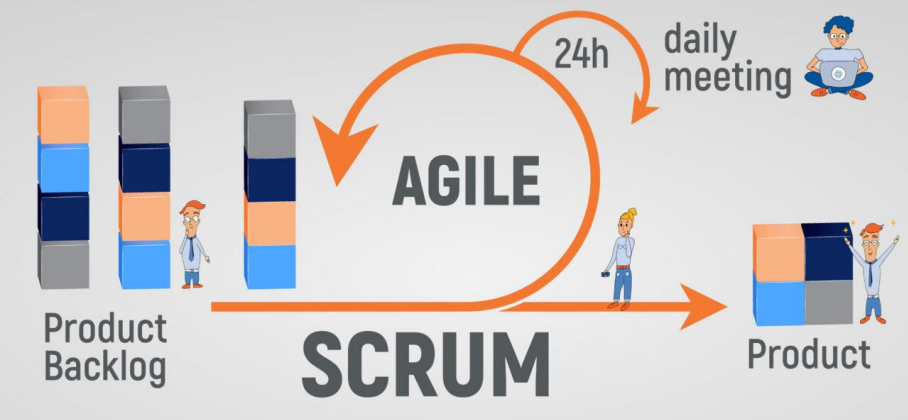

Figure 3: [Agile and Scrum]

4. A method of agile, **Scrum** "is an iterative and incremental agile software development framework for managing product development. It defines 'a flexible, holistic product development strategy where a development team works as a unit to reach a common goal',...challenges assumptions of the 'traditional, sequential approach' to product development, and enables teams to self-organize by encouraging physical co-location or close online collaboration of all team members, as well as daily face-to-face communication among all team members and disciplines involved" (Mountain Goat Software).

5. Another component of agile is **kanban**. The Japanese word for "visual signal", "A **kanban board** is an agile project management tool designed to help visualize work, limit work-in-progress, and maximize efficiency" (Rehkopf, M.).

So how does one successfully fulfill the key requirements for successful collaboration (e.g., governance, trust, communication, and kindness), and avoid the planning fallacy when managing projects or cultivating community while working with messy, flawed, and glorious humans?

An agile mindset and application of agile project management techniques are key since the Agile approach is collaborative, responsibilities are divided, and shared responsibility builds networks and community which builds trust.

For example, core components of Agile are the division of tasks into short phases of work, and the division of responsibilities among more than one team member. These short phases of work allow flexibility and modification plus a shorter time frame. Distinct tasks make it easier to avoid the planning fallacy. Additionally, Scrum, a key part of Agile emphasizes that the team is working together, enables self-organization, collaboration, and communication.

Using Scrum, a method of agile, means that the team works as a unit – or a network/community. Scrum also by its nature sets an expectation of shared and collaborative governance through self-organizing, collaboration, and communication. Similarly, another agile method used is a Kanban board which by helping visualize work, aids with communications with a wide variety of key colleagues.

Case Studies

Following are summaries of three case studies where the DCI has incorporated agile techniques into projects she has managed for the IPLC.

Collection Analysis Dataset Feasibility Study

This project began in October 2018 and concluded in April 2019. The goals of this project were to:

- Test methods and processes for collaborating,

- Document the time and resources needed to complete collaborative collections projects,
- Explore the rigor of our bibliographic records, and
- Explore Gold Rush's Library Content Comparison Tool as a viable option for IPLC's collection analysis work.

The diversity of expertise on the team was critical to the project's on time and under budget completion. This team worked as a unit of shared knowledge that intentionally included circulation and resource sharing, collection development, technical services, law librarianship, subject librarianship, and collection analysis expertise among the project team's members.

For this project, the DCI employed agile methods of dividing tasks into short phases of work, and constant reassessment and adaptation of plans. The project team reviewed tasks completed, in progress, and to be done at each weekly project team meeting, and about one third of the way through the project established a dedicated data analysis team to fulfill a gap in expertise needed to complete critical project tasks.

The time study from this project highlighted where each project team member recorded their time on task in 30 minute increments. The study revealed that most of the project time was spent in meetings. Meetings were where project governance was established, project tasks were developed and shared and where the team communicated and became a network. This time study exemplified how collaboration requires work, synchronous communication, and learning together.

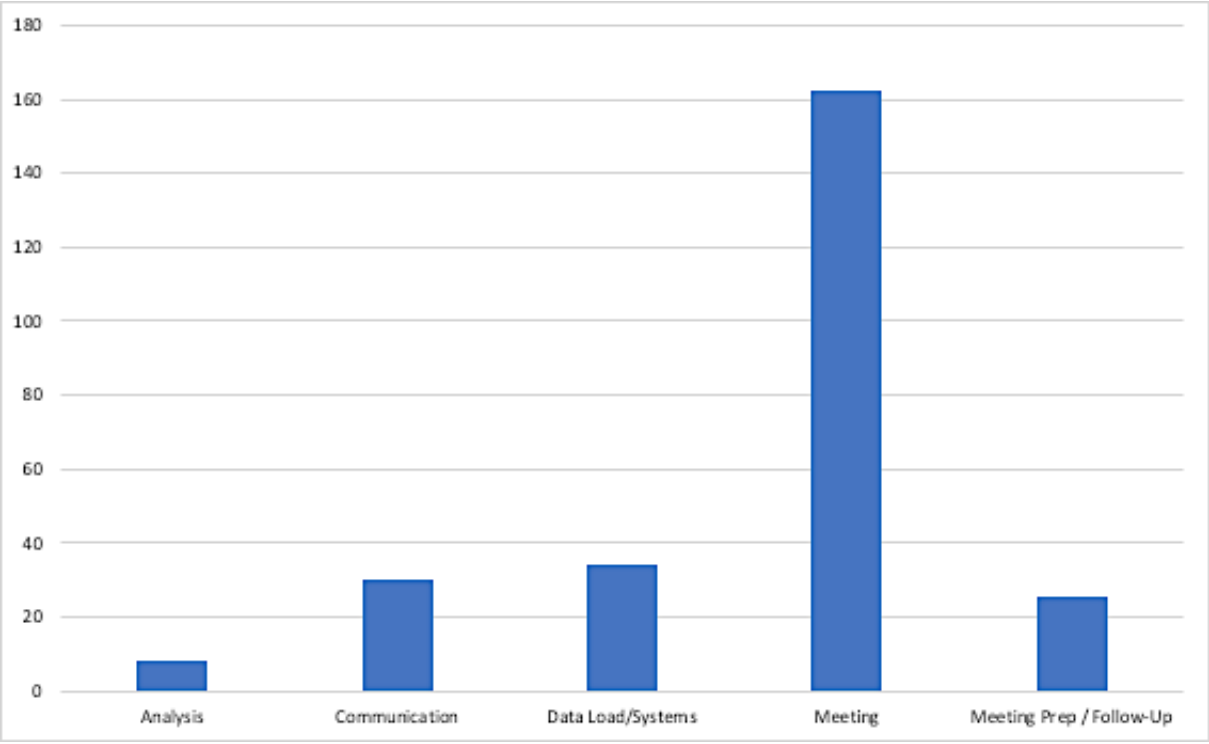

Figure 4: Project Team Time in Hours by Category

When analyzing the project team's time in hours by functional area, it is clear that even using agile methods with distributed project work, as well as an iterative flexible approach, projects need project management which takes time.

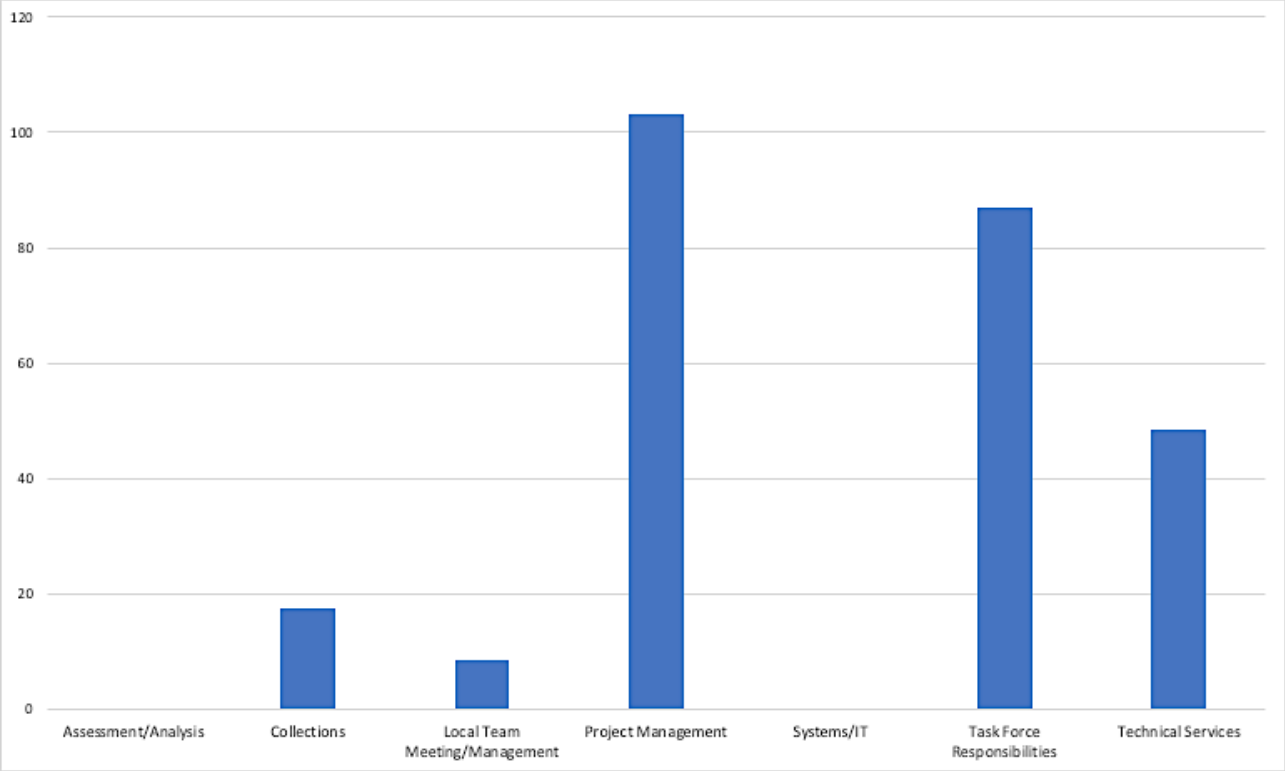

Figure 5: Project Team Time in Hours by Functional Area

Analysis for Collaborative Collection Development

The next project built on the Dataset Feasibility Study. This was bigger and began in October 2019 and concluded in June 2020. The Analysis for Collaborative Collection Development Project was a 5-part – or 5-interconnected team project with 26 people including the following teams:

- Data Extraction
- Data Analysis
- Defining Strategic Duplication
- Use Data Feasibility
- Use Cases for Data Analysis Approach

This project ran as if it were its own pop-up organization for 8 months with a mission to conduct data analysis to inform collaborative collections at a network level: what is owned and what is used across IPLC.

This project had five interconnected and dependent components that built on the work of the dataset feasibility study, most specifically the following recommendations from the feasibility study:

- Expand data in the Gold Rush Library Content Comparison Tool,
- Investigate demand for single-part monographs by comparing holdings and ILL and BorrowDirect data, and
- Investigate demand for single-part monographs by comparing holdings data with circulation data.

This multi-part effort informed the development of IPLC prospective collaborative collections within the partnership's "Collaborative Collection Development and Management of Collection" strategic priority. This was especially true for the "rigorous collection and analysis of data about holdings, collections use, and user behavior – and the development of better tools to support that analysis,". The project's five parts, each with their own project teams and each managed by the DCI, included:

1. Data
   Expand data in the Gold Rush Library Content Comparison Tool to include bibliographic records from all 13 partners for single part print monographs published between 2013 and 2017.

2. Use Cases
   Draft use cases – or revise the use cases written for the Dataset Feasibility Study – to explore areas of most duplication of general collection single part monographs published between 2013 and 2017 (e.g., language, subject heading or LC call number, imprint/publisher, imprint date, etc.)

3. Strategic Duplication
   Define what is "strategic duplication" and what constitutes "excess of demonstrated demand" based on both circulation and specialized subject areas built by endowments. This should result in collaborative prospective collection development for high-level parameters (e.g., English language, non-English language materials; high level discipline such as Humanities, Social Science, etc.). "Excess of demonstrated demand" means both collecting more than user demand and high demand where collective collections could help meet high user demand.

4. Use Data Feasibility Study
   Draft the data specifications and analysis parameters for resource sharing data and circulation.

5. Data Analysis: Holdings and Use Data
   Implement use cases to analyze duplication of single part monograph holdings and analyze holdings against use data (resource sharing and circulation) using "Strategic Duplication" definitions and documentation.

The big deliverable for this project was an interactive dashboard that took sample holdings (single part print monographs published between 2013 and 2017) and compared holdings to use by broad category such as publisher and LC Class: http://bit.ly/IPLC-ERL.

This dashboard includes modeling for how many copies are needed via our BorrowDirect high speed resource sharing network based on copies in the network and the time/duration of check out.

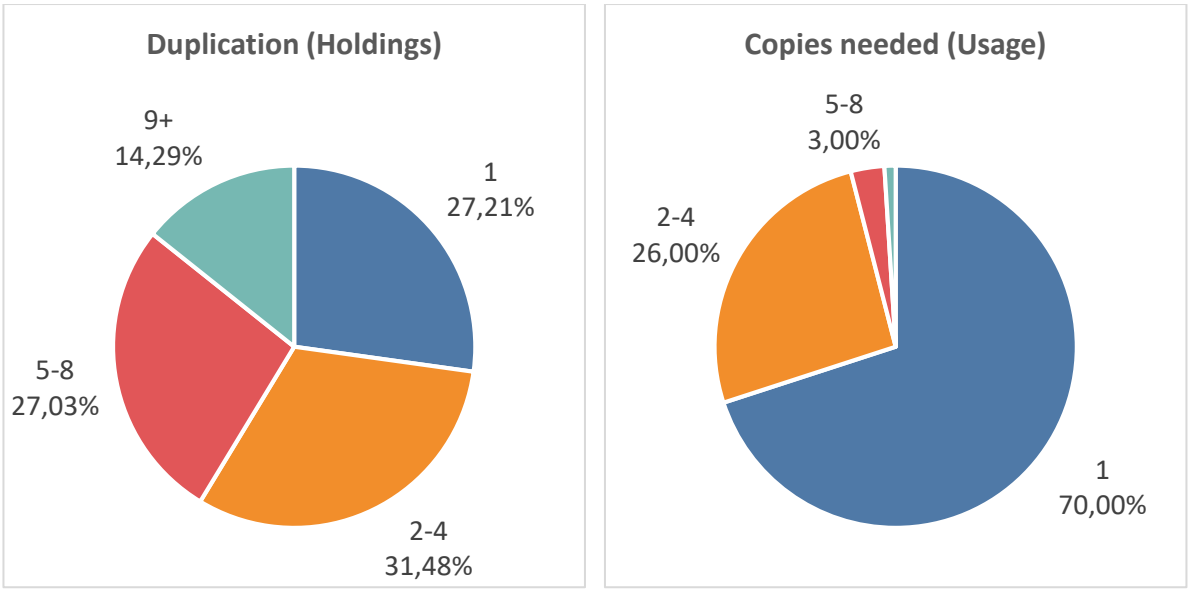

Figure 6: Duplication of Holdings vs. Copies Needed

Division of tasks and iteration were core to the project's process and key to successful outcomes especially given that each team's work informed and evolved one another's work.

IPLC Organizational Review

The third case study relates to organizational development. It was an organizational review with itentional engagement with the IPLC community that in turn informed the project's tasks. This project was managed by the DCI and IPLC's Director of Discovery & Resource Sharing Initiatives (DDRSI).

Though the DCI and DDRSI did not follow a specific 2-week timeframe like a Scrum sprint, they used Airtable to establish small iterative components and subcomponents of the project with Scrum sprint in mind as a structure for managing and working on the project.

They used Kanban board categories (To Do, Doing, Done + Waiting) for each project component and used an Airtable Gallery view to create a sharable dashboard to communicate in realtime with our colleagues who could open the dashboard at anytime to view the project's progress and status.

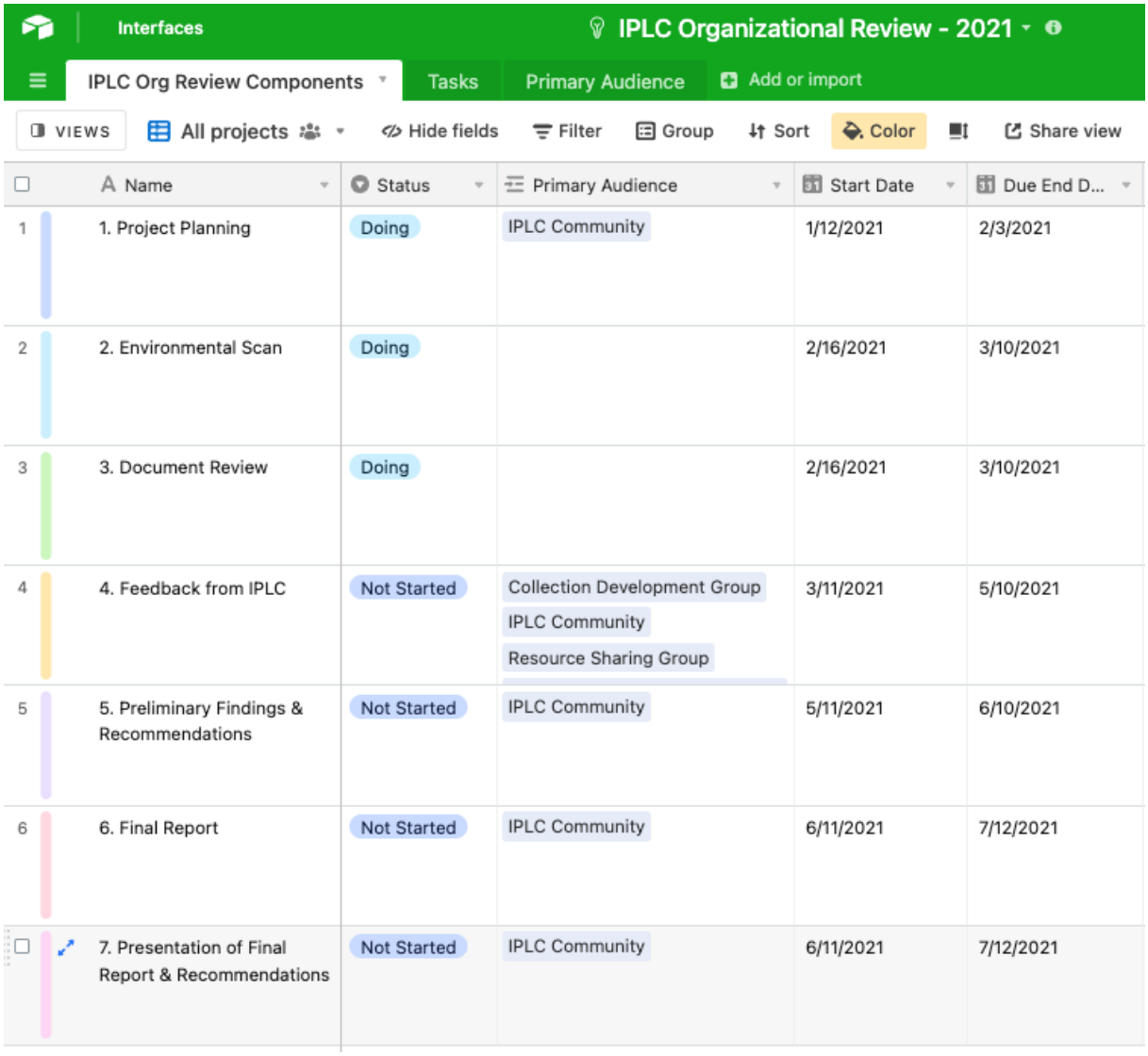

Figure 7: IPLC Organizational Review Project Tasks: Project Managers' View in Airtable

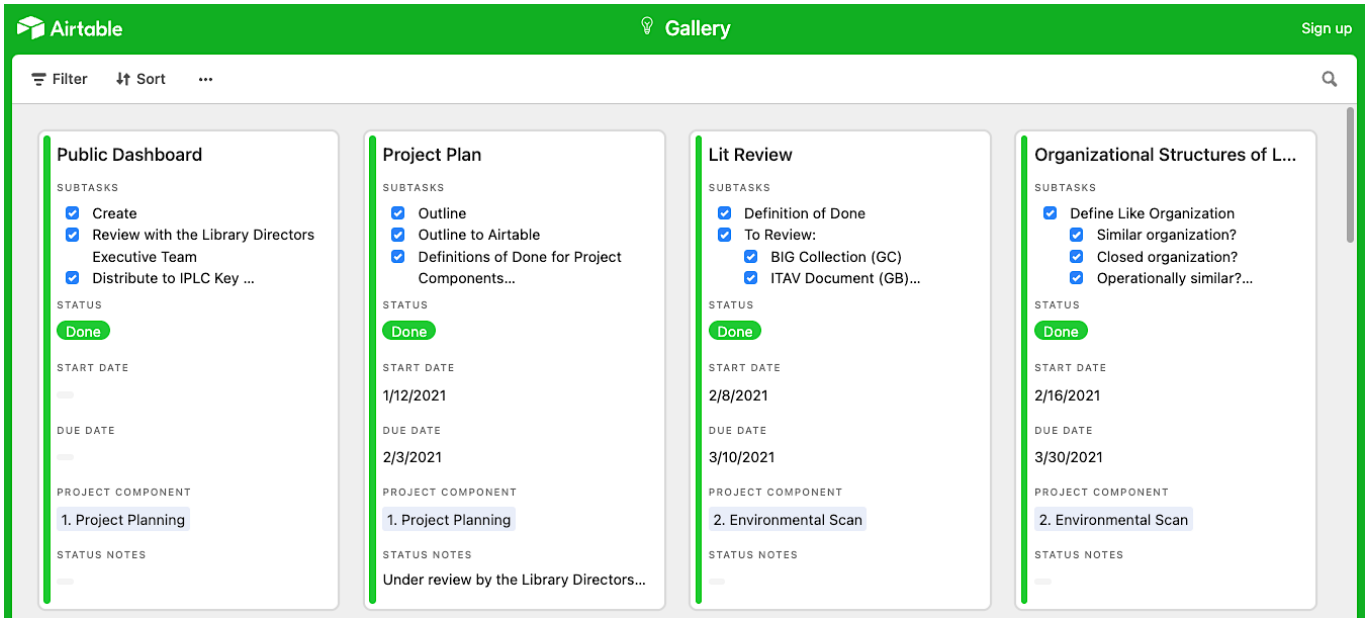

Figure 8: IPLC Organizational Review Project Tasks: Community View in Airtable

Conclusion

As both a mindset and a project management technique, Agile is tremendously powerful and effective for managing projects and building community. Agile project management enables teams to work as temporary pop-up organizations and create unique, mission-fulfilling deliverables. It establishes short phases of works and distinct tasks to complete within each phase, and consistently reassesses and adapts tasks as needed to meet projects goals. Because an essential part of Agile project management is division of responsibility, applying Agile requires communication and shared governance. Thus, it is an ideal process for cultivating community and collaboration.

Author

As the Director of Collections Initiatives for the Ivy Plus Libraries Confederation, Galadriel Chilton is the principal planner and project manager for collaborative collections initiatives and works with approximately 4,650 colleagues across 3 time zones. Galadriel earned her Bachelor of Arts at Berea College, and holds a master in library science from Indiana University, and master of arts in educational technology and instructional design from San Diego State University. Additionally, she has taught e-resource management and licensing classes for University of Wisconsin iSchool.

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