



# Sustainable Open Source Strategy



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The original source code of **Open Source** software is freely available online to be viewed, copied, redistributed, and modified.

# Why Open Source in Research?

Easily  
Obtainable



Transparent  
Workflow

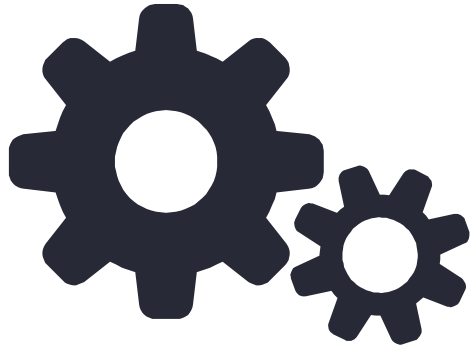


Streamlines  
Collaboration

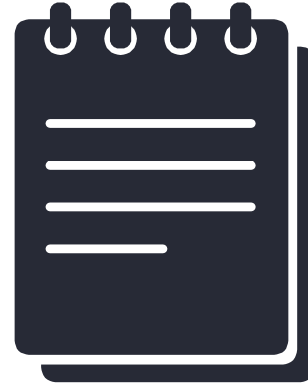


# Current State of Research Software

Technical Inexperience



Institutional Practices



# Obstacles to Changing Software Practices in Research

Training takes time and money



Publishing good software isn't rewarded



# Searching for a Solution

Our goals for the project were to:

- Assess the IGB staff's open source experience
- Spread awareness of open source ideas
- Create policy guidelines for the IGB
- Create a set of general suggestions for researchers



# The IGB can Benefit from Open Source



**Leibniz-Institute of  
Freshwater Ecology  
and Inland Fisheries**

# Project Objectives

- **Evaluate** the challenges and opportunities for open source software practices
- **Identify** the steps that will lead to successful open source software practices
- **Develop** policy guidelines and suggestions for researchers interested in open source



# Information Gathering

## Two Focus Groups

- IGB Staff
- Digital Humanities Researchers



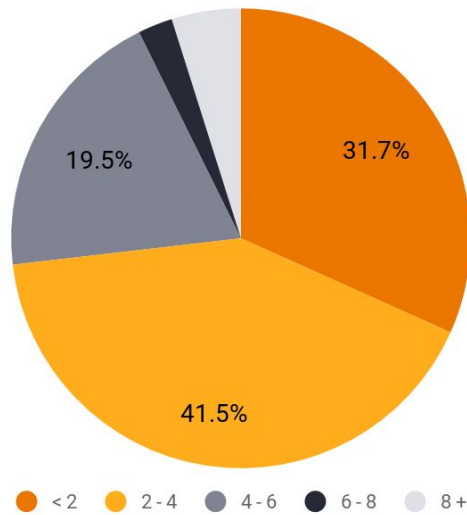
## Conducted Surveys and Interviews

- 42 IGB Survey Responses
- 6 Digital Humanities Responses
- 12 Total Interviews

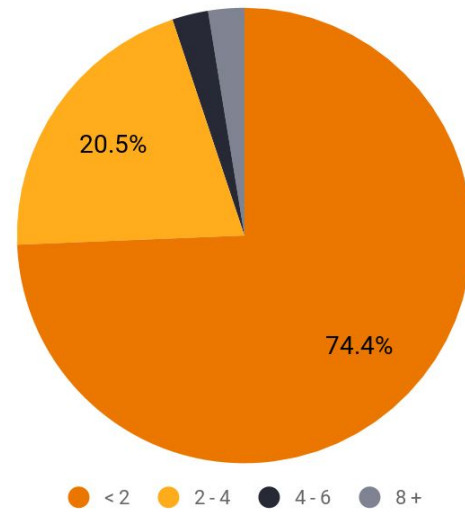


# Software is Integral to Research Staff

Hours per day participants spend using scientific software

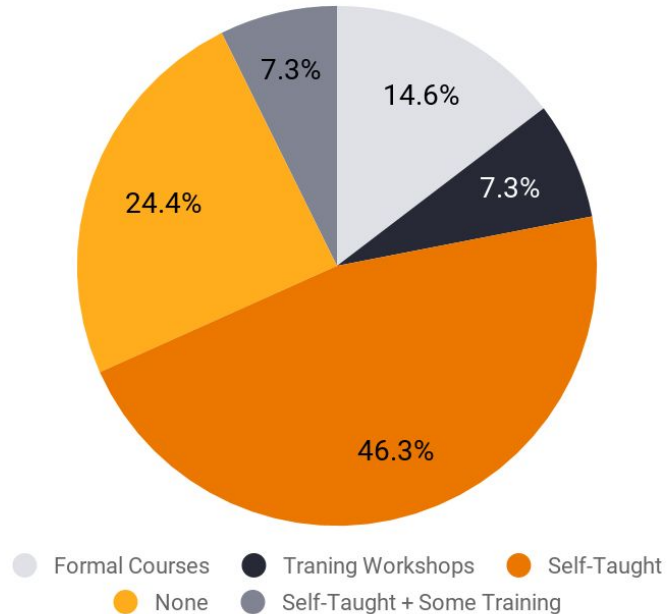


Hours per day participants spent developing software



# Researchers are not Professional Programmers

Level of Participant Software Training



## There is a Desire to Learn Skills

“Getting into a healthy routine of documenting and commenting scripts would be very useful” (IGB researcher)



# A Culture of Collaboration Already Exists

“We do share our code on certain applications and change it for slightly different purposes” (IGB Researcher)



# There is no Institutional Support for Open Source

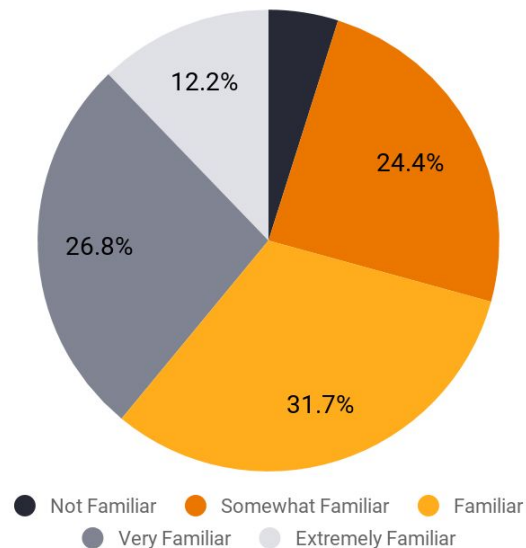
“Programming is part of our job, it's not something you get rewards for.” (IGB staff member)



# Open Source CAN Work

“I think open is, perhaps to a fault, an understood characteristic of Digital Humanities work and anyone not making their materials open looks a little out of place”

Participant familiarity with open source



# Primary Takeaways

Institutional support is necessary for open source publication

Importance of confidence in the code that is created





# Administrative Solutions

## Policy Brief for IGB Administration

- Revamp the internal bitbucket git server for sharing.
- Host seminars/workshops on software development.
- Open Source Licensing/Journals .
- A LOM System change that gives credit for published software



## Individual Solutions

Flyer for distribution at  
the IGB

# OPTIMIZE YOUR RESEARCH WITH OPEN SOURCE

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## WHY OPEN SOURCE?

You've probably heard of open source. But did you know that it can help you improve your code and research overall?

Publishing your code or work open source can:

1. Ensure easy access later if needed (who knows when you may need it!)
2. Enable you to keep track of the program's development
3. Ensure the reproducibility of your work by making the software you used easy to find. No one likes having to re-create code.
4. Help resolve errors in your work. The open source community are a helpful bunch
5. Make it easy for others to use and build on your work
6. Encourage others to give feedback quickly. Avoid those long wait times

# Broader Applications

General Guidelines for  
all Researchers





# Questions?



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