

Open Project Management

from an “open” perspective

Instructor: Dr. Bradly Alicea

<http://bradly-alicea.weebly.com>



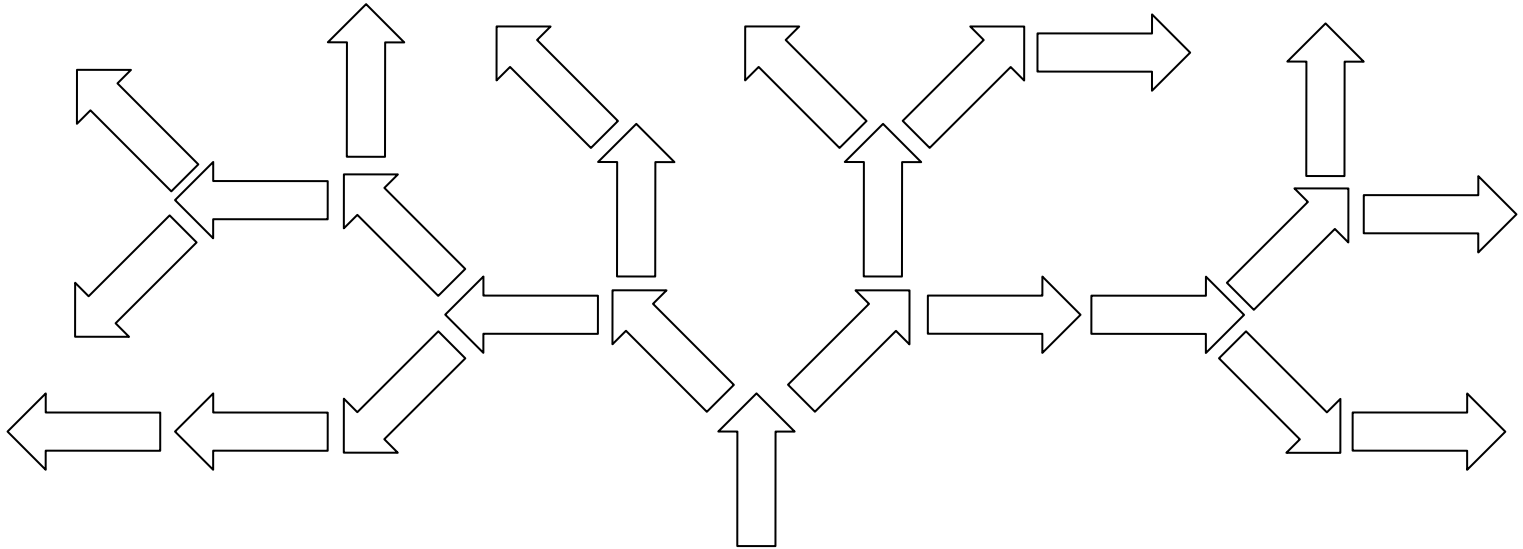
IS 340: Spring 2023

All content



Open Project Management

Welcome Back!



Working Open, Working Collaboratively



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Open Leadership and Events/Working Open

[< Open Leadership and Events](#)

Here at Mozilla, we talk a lot about working openly. The word “open” is even in our team name ([Open Leadership & Events](#)). But what does that mean and how does one go about doing that?

There are lots of resources and many ways you can get started on working openly (for example, these [great posts](#) by [Open Matt](#)). We thought it might be helpful to put together a guide to get you started. Feel free to make a copy of this document and make it your own!

Step 1 - DESIGN

To figure out what you’re doing and why, you can:

- Write a [POP \(Purpose-Outcomes-Process\)](#) to help you clarify your aims and plans for your work. ([worksheet](#))
- Fill out an [Open Canvas](#) to define and share your project goals, community strategy, and needs for resources. ([canvas](#))
- Write a [vision](#) to describe your project’s big idea in a super short form that you can share with everyone and anyone.

Step 2 - BUILD

To let people know how to join, you can:

- Create a short text document called a [“README” file](#), to welcome newcomers to your project
- Create [Personas and Pathways](#) for your project, a tool to help you plan and test how you’ll interact with new contributors.
- Write or choose a [Code of Conduct](#), to establish guidelines for how members of your community interact with each other.
- Write [Contributing Guidelines](#), a set of instructions that explain how new contributors can help out on your project.
- Add an [open license](#) to help others understand how they can reuse, remix, and share your work. (choose a license for [code](#) or [content](#))

Step 3 - EMPOWER

To Invite people to collaborate, you can:

- Develop [effective communications channels](#) for your project.
- Make [personal invitations](#). People are 4x more likely to contribute if they receive a personal invitation.
- Mentor [new contributors](#) to raise up new leaders in your project.

Step 4 - WORK OPEN

Collaborate & help others be open!

Mozilla Wiki entry on Working Open

<https://wiki.mozilla.org/>

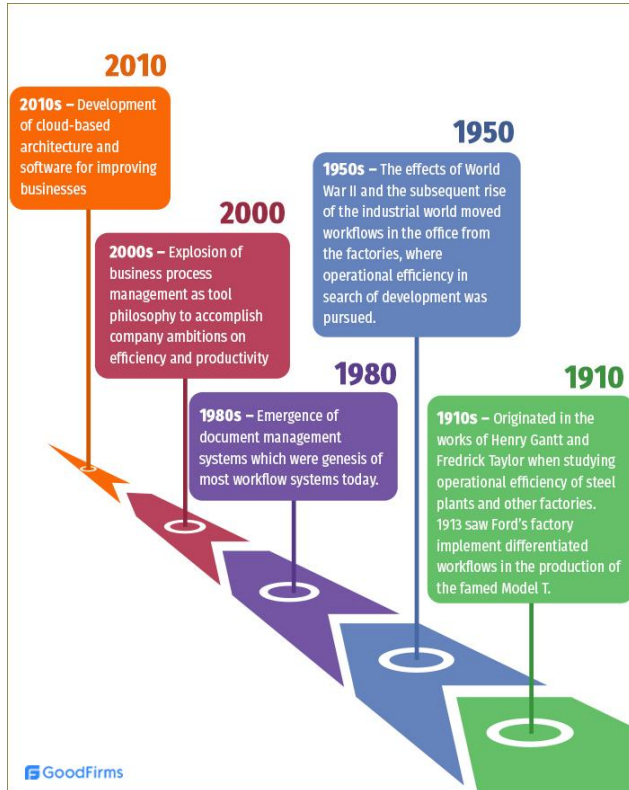
Your Project of Interest (P-O-P ed)

Purpose	Outcome	Process
What do you want to do?	What set of deliverables are required?	Workflow
Why do you want to do it?	What needs to result in 1, 5, or 10 years?	Roadmap

Your Project of Interest (P-O-P ed)

Purpose	Outcome	Process
What do you want to do?	What set of deliverables are required?	Workflow
Why do you want to do it?	What needs to result in 1, 5, or 10 years?	Roadmap
How do you want to do it (radically open, Proprietary components)?	What components do you need (strategy, tools)?	Technology Stack

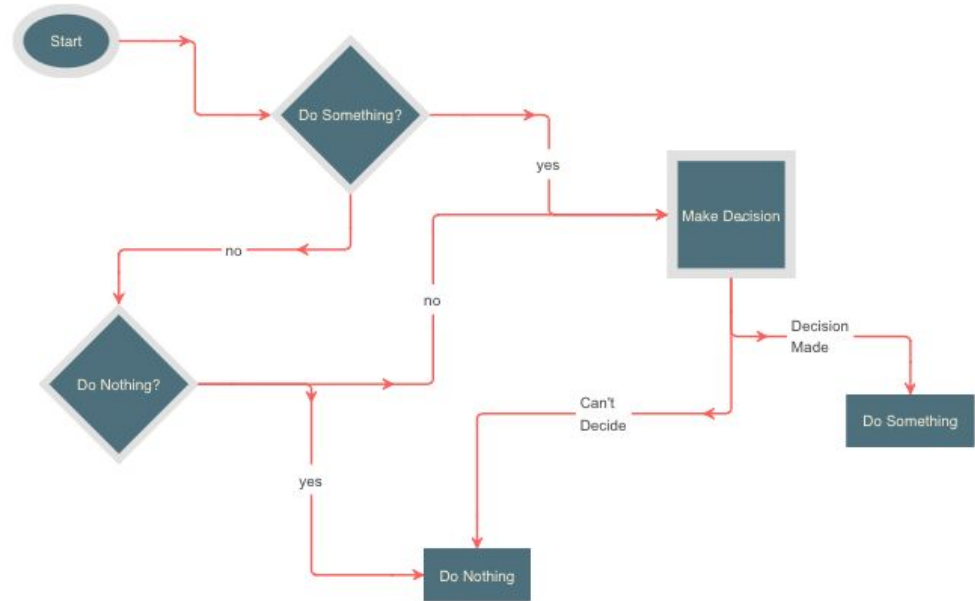
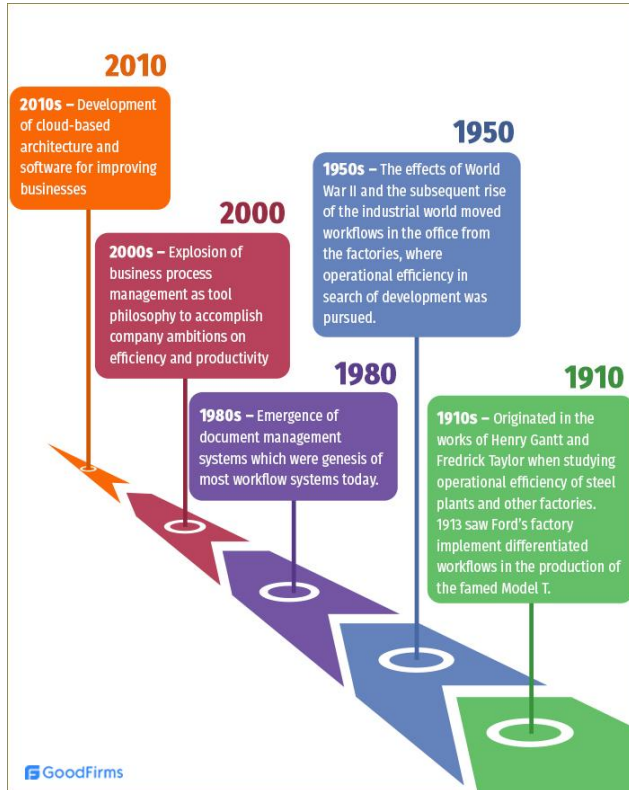
Workflow vs. Roadmap



COURTESY

<https://www.goodfirms.co/workflow-management-software/blog/best-free-open-source-workflow-management-software>

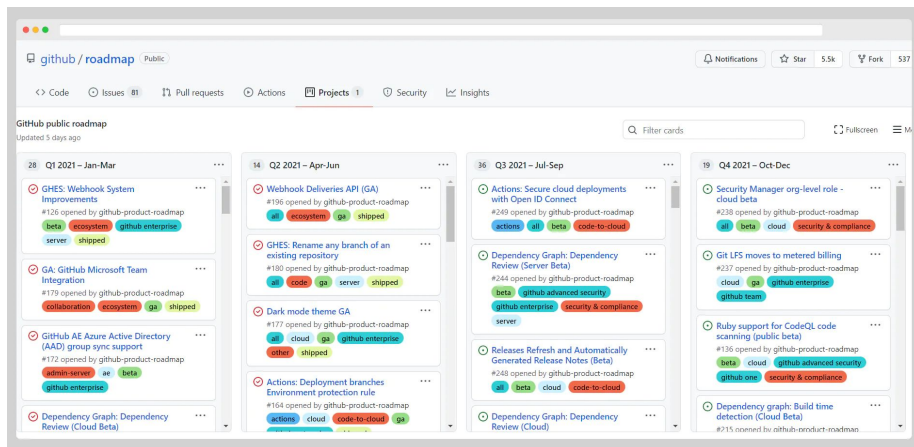
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Workflow vs. Roadmap

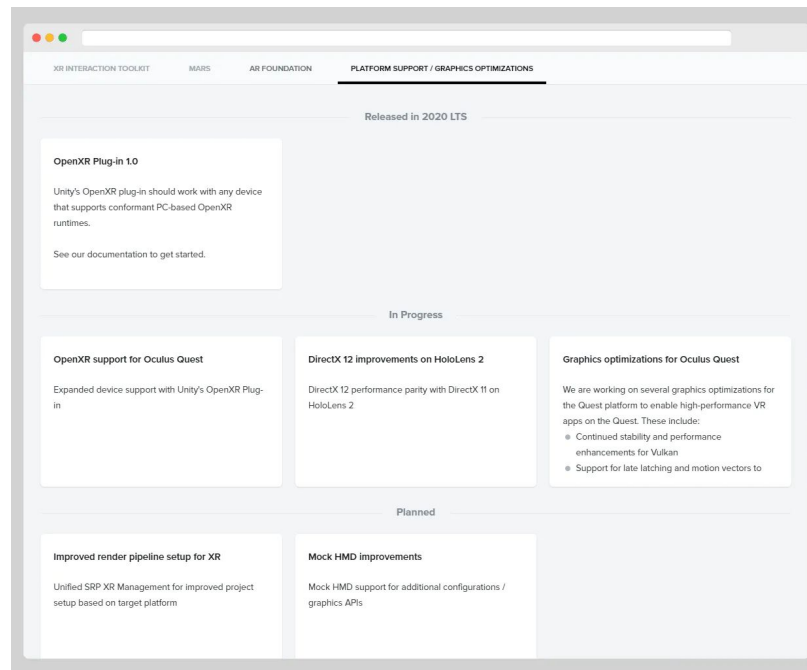


Github Kanban Board (generic)

COURTESY

<https://www.feedbear.com/blog/roadmap-examples>

Unity Development Map (3-D graphics)



Project Vision Statement and Open Canvas

Project Vision Statement

Example: Mozilla's vision for the open web.

The Web is the most important communication system in the world today and is an essential part of the daily lives of many. The Web gets many things right — hence its wild success — but is nonetheless imperfect. Our objective is to preserve what is good about the Web while improving what is less good and fixing what is actively harmful.

Our vision starts with three basic values for the Web, rooted in the [Mozilla Manifesto](#):

- *Openness*: Everyone can access the Web, and use it to reach others.
- *Agency*: Once individuals reach the Web, they are empowered to accomplish their goals effectively and on their own terms.
- *Safety*: The experience of using the Web must not put individuals in danger.

Applying these values to the Web as it is today reveals a number of things we can do to make it better:

- *Protect user privacy*: Essentially all user behavior on the Web is subject to tracking and surveillance. A truly open and safe Web requires that what people do remains private; this requires gradually shifting the ecosystem towards a new equilibrium without breaking the Web in the process.
- *Protect users from malicious code*: Users must be able to browse without fear that their devices will be compromised, and yet every Web browser routinely has major security vulnerabilities. The technologies finally exist to significantly reduce this kind of security issue; we are increasing our use of them in Firefox and look forward to others doing the same.
- *Encrypt everything*: All user communications should be encrypted. We are near the end of a long process to secure all HTTP traffic, and encryption needs to be retrofitted into existing legacy protocols such as DNS and built into all new protocols by default.
- *Extend the Web... Safely*: New capabilities make the Web more powerful but also create new risks. The value added by new capabilities needs to be weighed against these risks; some applications may ultimately not be well suited for the Web and that's OK.

<https://www.mozilla.org/en-US/about/webvision/>

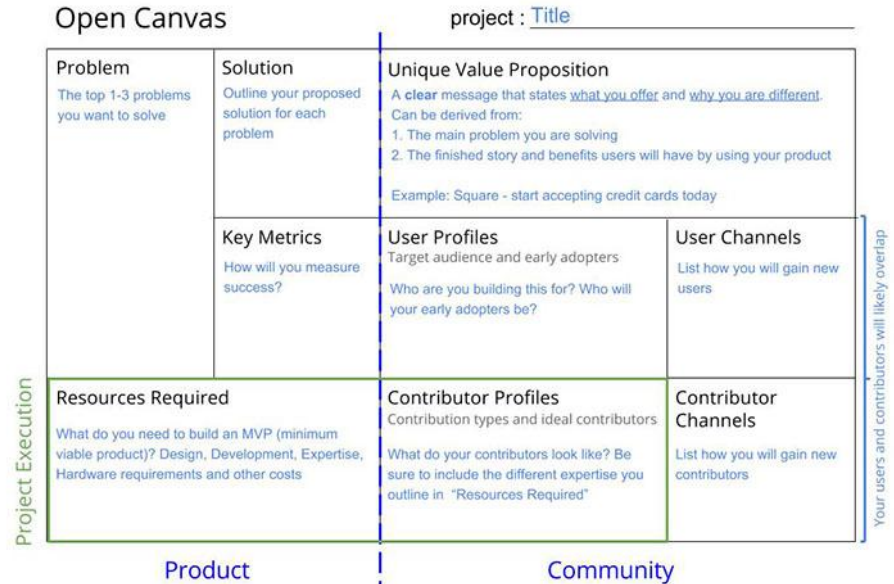
- *Make the Web fast enough for any use*: While Web browsers are much faster now than they were five years ago, we still see major performance issues. Fixing these requires making both browsers and infrastructure faster, and also making it easier and more attractive for people to build fast sites.
- *Make it easy for anyone to publish on the Web*: While early websites were relatively simple and easy to build, the demands of performance and high production values have made the Web increasingly daunting to work with. Our strategy is to categorize development techniques into increasing tiers of complexity, and then work to eliminate the usability gaps that push people up the ladder towards more complex approaches.
- *Give users the power to experience the Web on their own terms*: The Web is [for users](#). In order to fulfill that promise we need to ensure that they, not sites, control their experience, whether that means blocking ads or viewing content in accessible form. This requires building a browser that displays the Web the way the user wants it — rather than just following instructions from the site — as well as strengthening the technical properties of Web standards that enable this kind of reinterpretation.
- *Provide a first-class experience for non-English-speakers*: The technical architecture and content ecosystem of the Web both work best for North-American English speakers, who are a fraction of the world. We want the Web to work well for everyone regardless of where they live and what languages they speak.
- *Improve accessibility for people with disabilities*: As Web experiences have grown richer, they've also become more difficult to use with assistive technology like screen readers. We want to reverse this trend.

Powerful economic and technological forces have combined to make the Web the way it is today and some of these problems won't be easy to fix. Parts of the road ahead are clear and others — especially how to address monetization and centralization — are much murkier, but we see ample opportunity to work together as a community to make a Web that is truly open and accessible to all.

Project Vision Statement and Open Canvas

Open Canvas: a collection of project goals, strategies for building community, and resource requirements.

GOAL: build and implement a Minimal Viable Product (MVP).

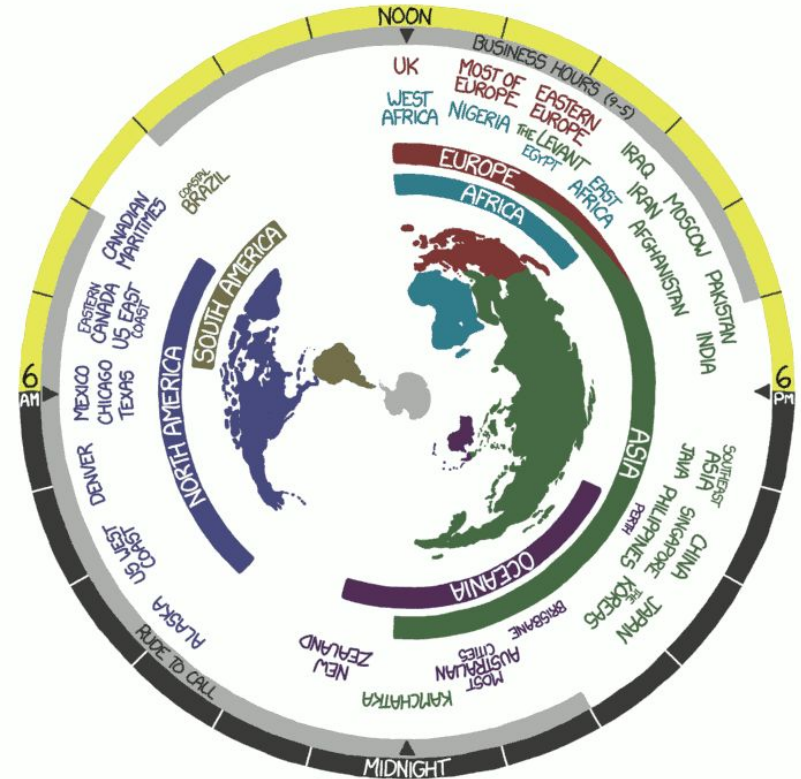


<https://mozilla.github.io/open-leadership-training-series/articles/opening-your-project/develop-an-open-project-strategy-with-open-canvas/>

Working Collaboratively Using Open Principles

Working Collaboratively

Distributed collaboration: collaborators with heterogeneous skills available at different times and in different places.



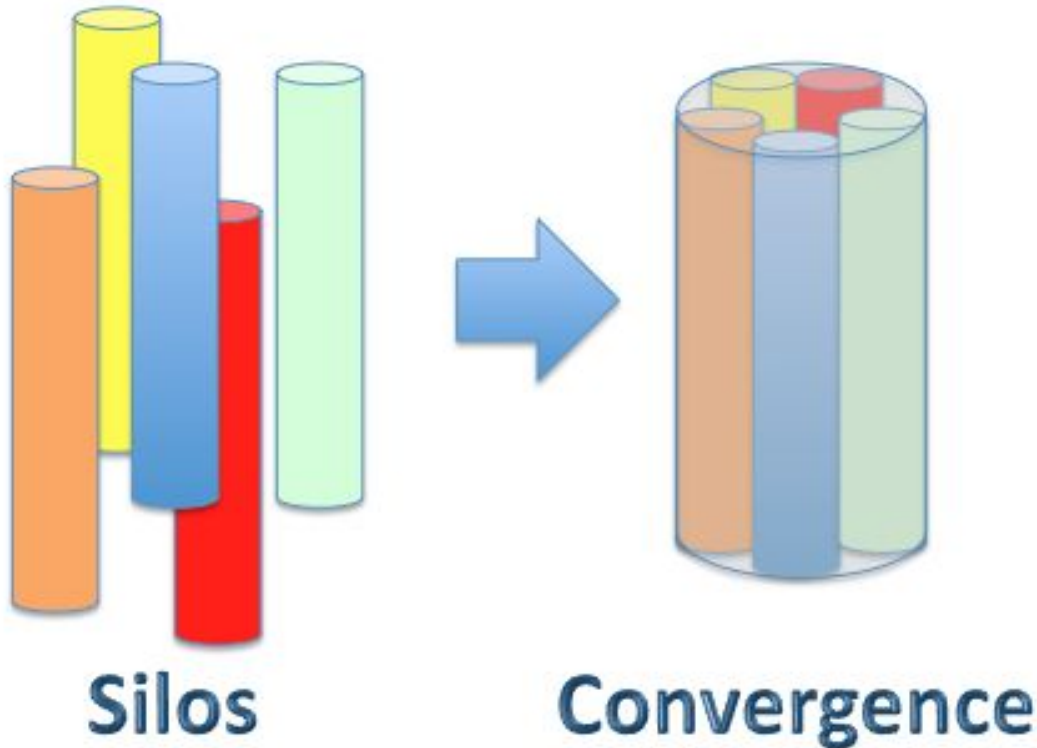
Internet Technologies (and bandwidth) have enabled global collaborative work.

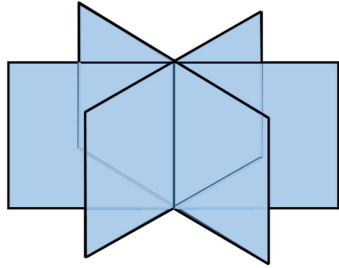
- shared documents, code files, and version-control systems.
- video conferencing platforms.
- chat, messaging, and discussion platforms.
- interactive media (whiteboards, screensharing and capturing notes).
- digital workflows and ways of managing system complexity.
- immersive spaces for demonstration.

Managing a Distributed Research Group

**(Orthogonal Research and Education Lab and Active
Inference Institute examples)**

GOAL: Overcoming the Limitations of Academic Silos

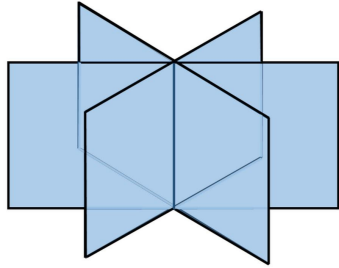




Computation \perp Empiricism \perp Theory



How do you bring together a diverse set of collaborators in different physical locations?



Computation \perp Empiricism \perp Theory



Answer: thematic meetings that are recorded and made available for later viewing.

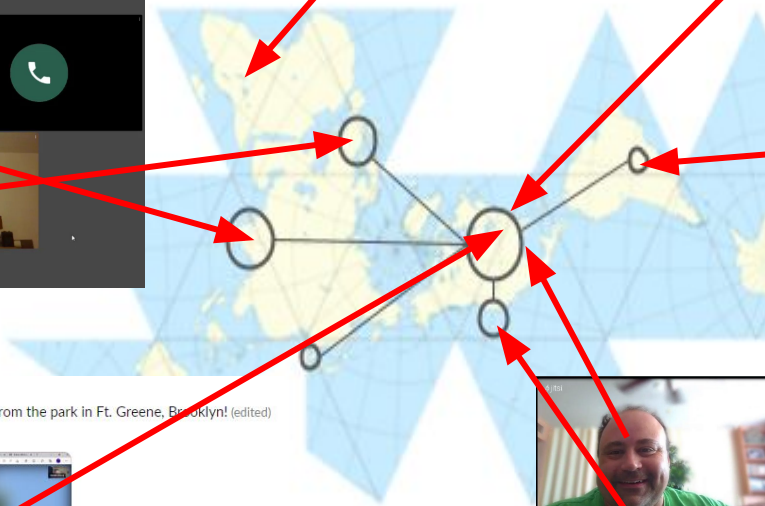
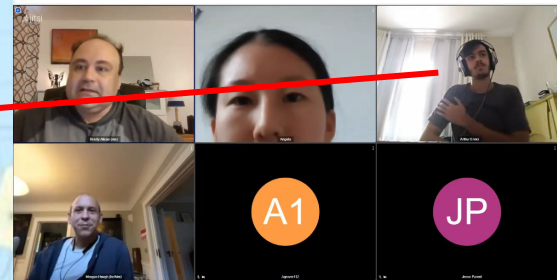
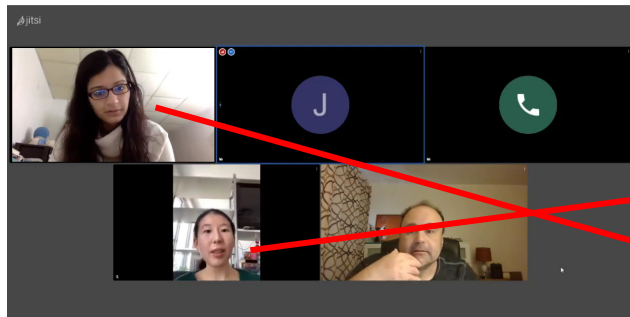
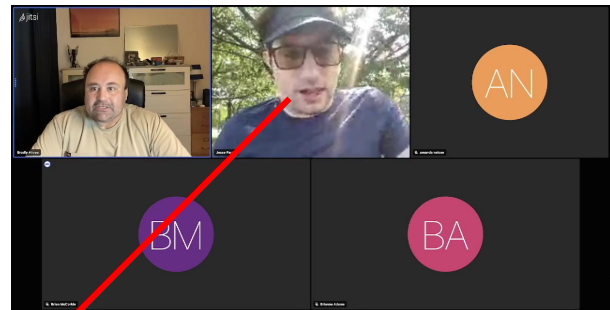
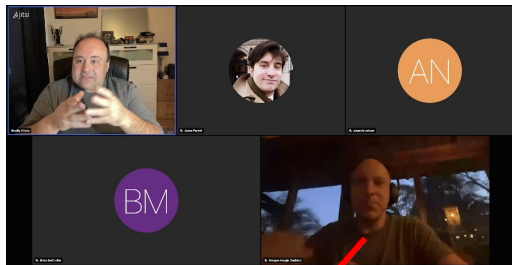
Example: **Saturday Morning NeuroSim (typical time 2h, 20min)**


General (interdisciplinary) research interests, with a focus on Neuroscience, Cognitive Science, and Artificial Intelligence.

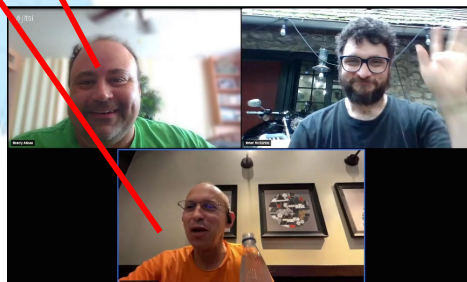
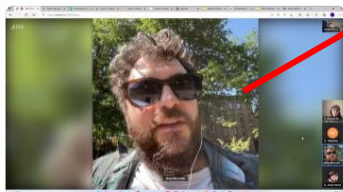
Synchrony: a common place to share ideas and connect. Virtual presence beyond text-based discussion forums.

Asynchrony: a way to browse topics of interest, stay connected with current trends in the Lab.

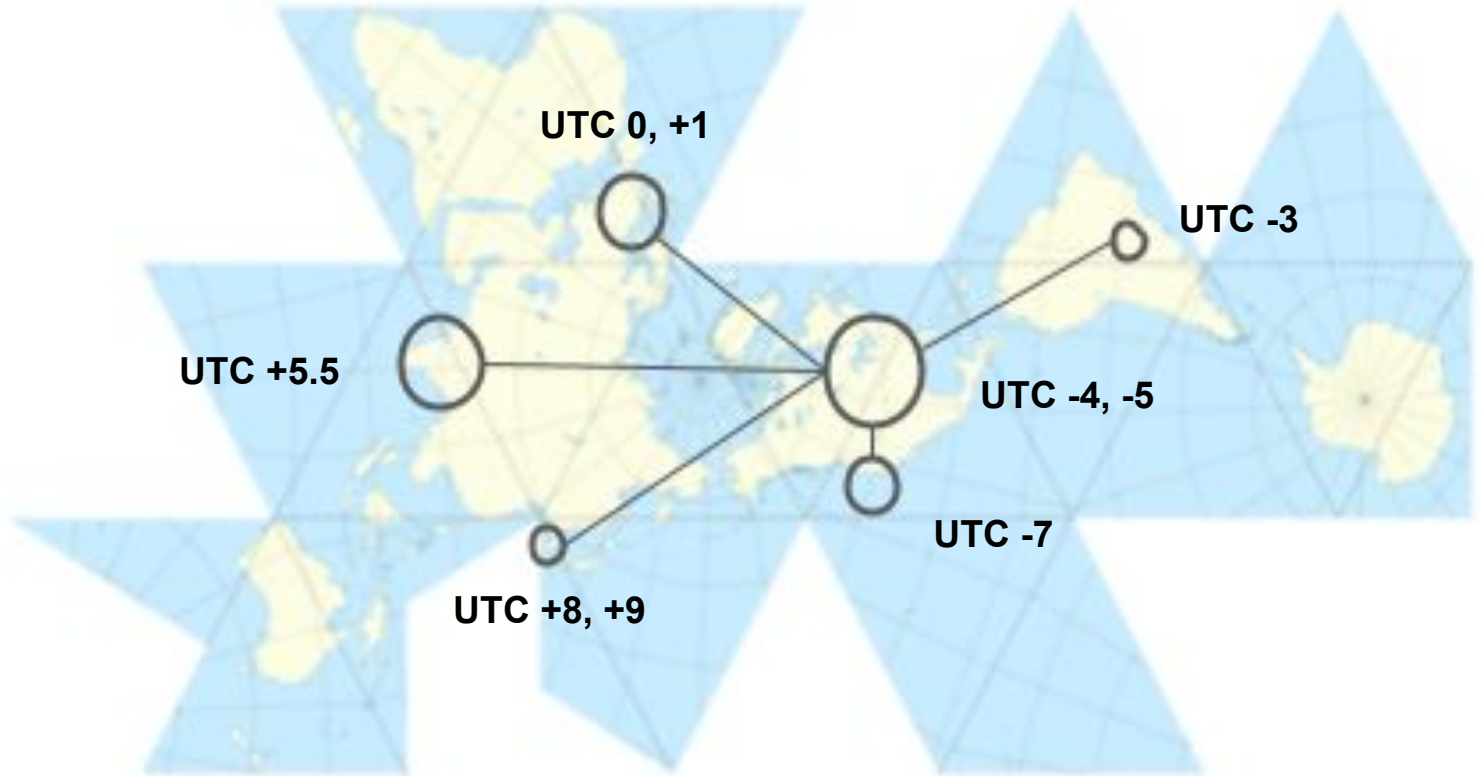
Automated transcription (Otter.ai) and **video segmentation** (YouTube chapters) help people find content and follow up on topical threads.



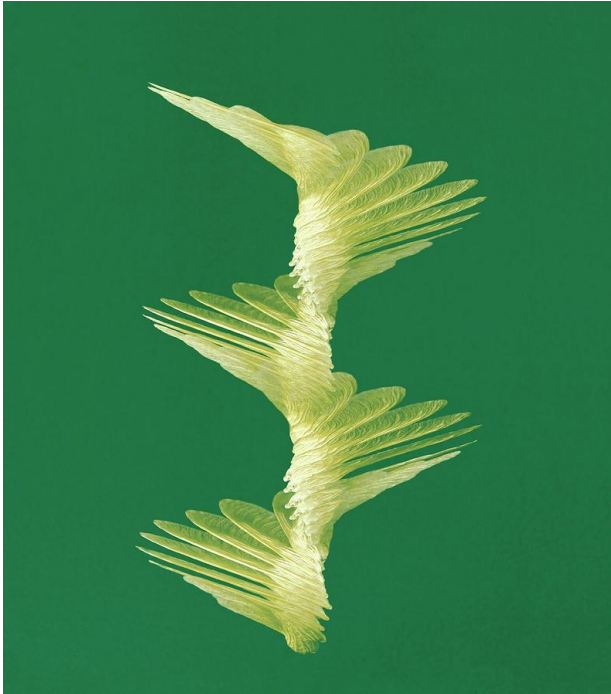
 **Brady** 2:18 AM
Thanks to @Brian McCorkle for joining in from the park in Ft. Greene, Brooklyn! (edited)
ft-greene.png ▾



Time zone coordination



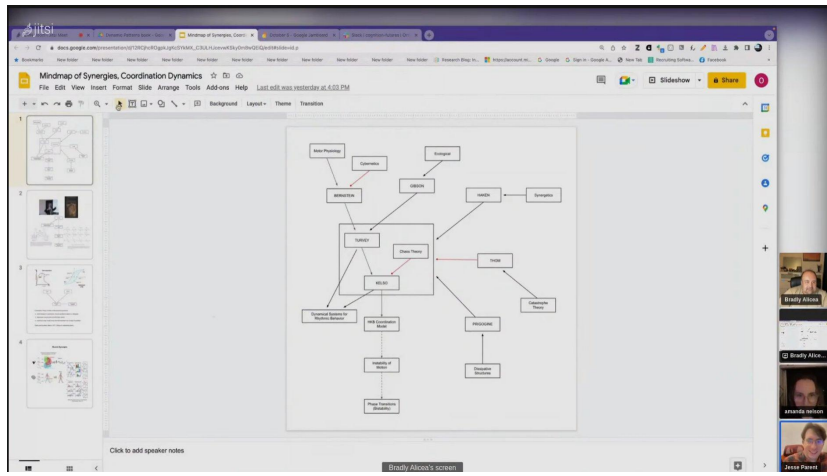
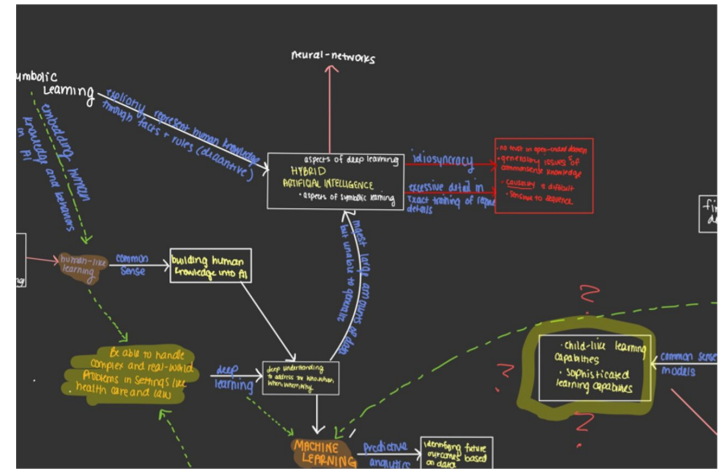
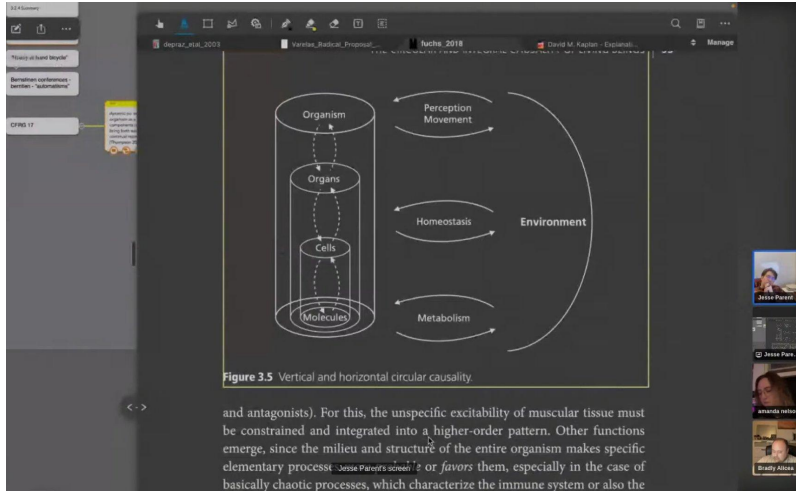
Practice and Learning of Research



Twirlybird Method (h/t Jesse Parent)

Ideas in notes, meetings, and casual conversations are key to understanding.

- these ideas often get lost in the ether, but are essential to project progress.
- conventional notetaking loses a lot in translation. Need an integrated form of institutional memory.
- linking notetaking with meetings fosters creativity from these serendipitous events.



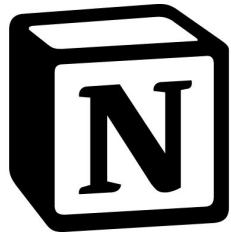
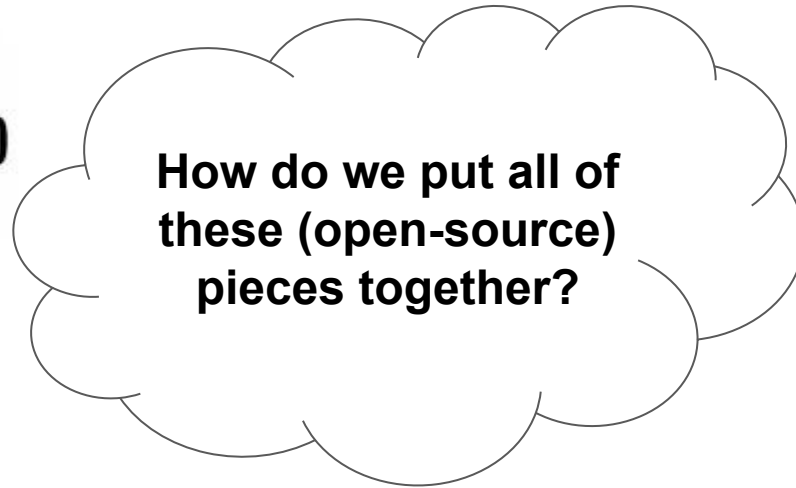
Clockwise from upper left:

Reviewing a book in MarginNote (Jesse Parent).

MindMap on iPad (Sadena Ahmad).

Literature map in Google Slides, Jamboard (Bradly Alicea).

Practice and Learning of Research



NOTETAKING



PREPRINTS AND
ARCHIVING

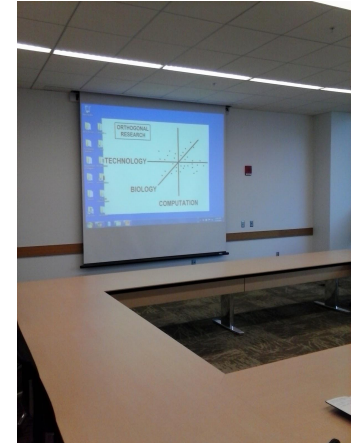
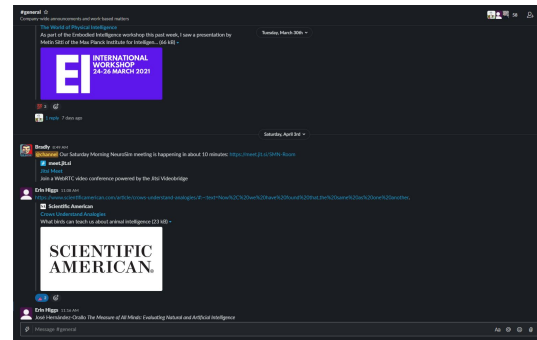
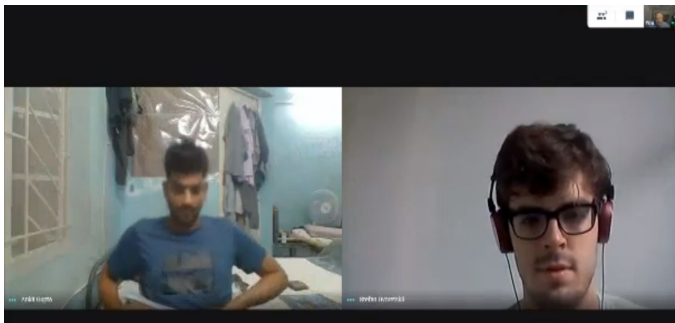
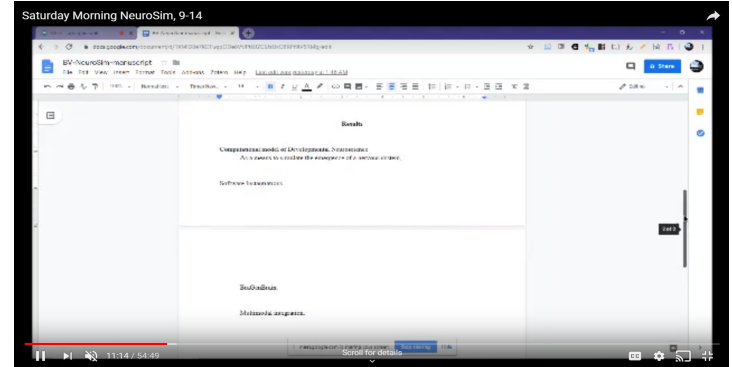


TEXT
EDITOR

Synchronous and Asynchronous Coordination

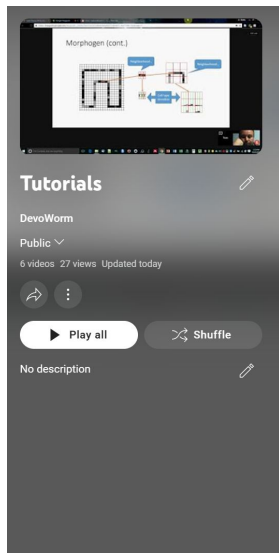
Use a combination of Jitsi, GDocs, Github, and Slack:

- Chat (daily, async) and Video (weekly, sync) meetings.
- working sessions (paper-writing, brainstorming).
- Hackathon-style sessions (virtual and physical).



Build a Library of Videos

RIGHT: video chapters (cue up important discussions), **BOTTOM:** video playlists (cue up essential videos).



Morphogen (cont.)

Tutorials

DevoWorm

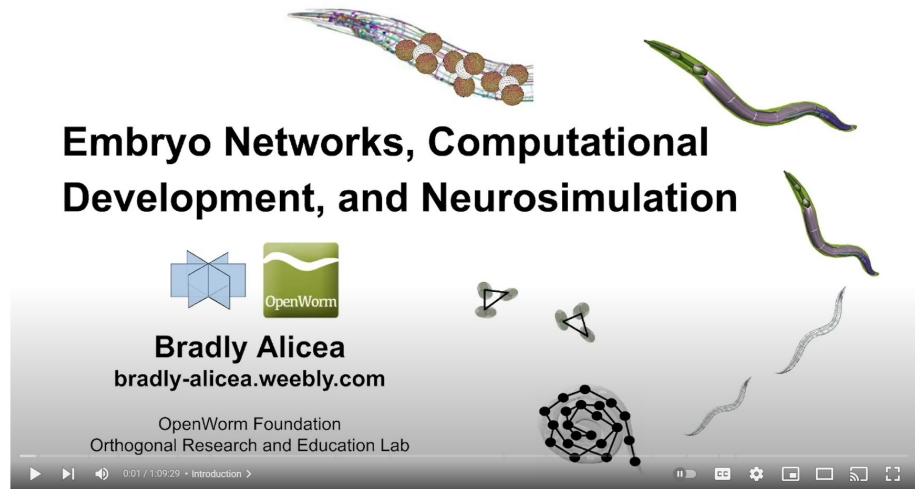
Public

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- Sort
- Morphozoic Tutorial, OpenWorm Open House, October 25, 2016
DevoWorm • 277 views • 6 years ago
 - Tutorial for DevoLearn
DevoWorm • 13 views • 2 years ago
 - DevoLearn Tutorial (13 minutes)
DevoWorm • 30 views • 1 year ago
 - Embodied Hypernetworks: graphs as spatioanatomical embeddings
DevoWorm • 14 views • 4 months ago
 - Embryo Networks, Computational Development, and Neurosimulation
DevoWorm • 64 views • 1 month ago
 - Mapping differentiation trees to radial embryonic growth
DevoWorm • 19 views • 3 years ago



Embryo Networks, Computational Development, and Neurosimulation

Brady Aicea
brady-alicea.weebly.com

OpenWorm Foundation
Orthogonal Research and Education Lab

0:01 / 1:09:29 • Introduction

Embryo Networks, Computational Development, and Neurosimulation

DevoWorm
76 subscribers

Analytic Edit video

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64 views Dec 15, 2022 Network Science
One hour lecture on "Embryo Networks, Computational Development, and Neurosimulation". Presenter: Brady Aicea, December 2022.

Chapters

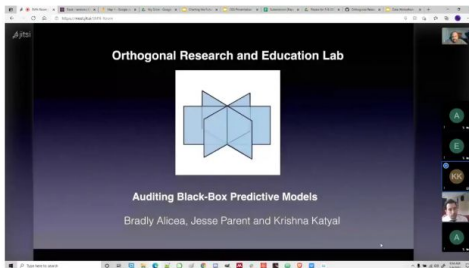
- Integration 37:50
- generative Divergent Integration Model 41:09
- Different types of networks 45:52
- Mosaic development 49:13
- Epigenetic strategies 51:59
- First mover dynamics 54:29
- Embryo Dynamics 55:42
- Embodied Development...

Networked Chats and Discussion Threads Over Time

Recap from Recent Saturday Morning NeuroSim Discussions

If you have been keeping up with the [Orthogonal Research and Education Lab YouTube channel](#), you will see that we have been engaged in quite a few wide-ranging discussions over the past several weeks. Here is but a sampling:

1. a review of the [NeuroTechX virtual conference](#) (Rishabh Chakrabarty).
 - [Speakers list](#) (hosted by Queen's University, Canada).
4. a discussion on the evidence for and against [Cultural Universals](#) (Bradly Alicea)
 - Interview with Michael Tomasello, [Some basic notions of fairness are culturally constructed](#). *BOLD: Blog on Learning and Development* (2016).
 - Sam Passmore and Fiona M. Jordan, [No universals in the cultural evolution of kinship terminology](#). *Evolutionary Human Sciences*, 2, e42, 1–14 (2020).
 - Artin Arshamian et.al, [The perception of odor pleasantness is shared across cultures](#). *bioRxiv*, doi:10.1101/2021.03.01.433367 (2021).
5. a brief introduction to resources for [Auditing Black Box Predictive Models](#) (Krishna Katyal).
 - [FairML Github repo](#) (Julius Adebayo and Micha Gorelik).



If you would like join the conversation, feel free to join our lab Slack team! (via [Launchpass](#)), join in our weekly Saturday Morning NeuroSim meeting (3pm UTC on [jit.si](#)), check out or [meetings on YouTube](#), or contact us via [e-mail](#) about how to become involved.

Link video segments from different meetings with articles, books, and other media.



Active Inference Institute

<https://www.activeinference.org/>

Rich threads connected through digital networked media

ActInfLab Livestream #040.1
A free energy principle for generic quantum systems
March 17, 2022

[Livestream Discussions](#)

Livestream discussions are centered around research articles that deal with Active Inference, Free Energy Principle, and related topics

ActInfLab GuestStream #022.1
Dopamine Nation
Anna Lembke
Watch on YouTube

[GuestStreams](#)

GuestStreams are presentations and discussions with a range of researchers and practitioners

ActInfLab OrgStream #001.1
Richard D. Bartlett
October 28, 2021

[OrgStream](#)

Active Inference MathStream #001.1
Shanna Dobson
Watch on YouTube

[MathStream](#)

The Active Inference Podcast
Active Inference podcast #006.2: A tale of two densities (2020)
Released Monday, 26th October 2020

Textbook Group Registration

This form registers you to participate in a future cohort of the Active Inference [Textbook](#) Group.

The Textbook Group is about **learning Active Inference in an open science setting**.

When a new cohort of the Textbook Group begins, we onboard you.

Cohort 3 begins on January 25th, 2023.

- This Onboarding will be an email from ActiveInference@gmail.com, containing a link to the Coda document that will be the single source of truth for this Textbook Group cohort.
- This Coda will have supporting material and learning practices to understand each chapter, as well as information on the calendar of the Textbook Group. Everyone will have an individual learning space, so you can easily share your work, collaborate with others, and get help.

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From The Podcast
The Active Inference Podcast

The Active Inference podcast is a discussion-based participatory exploration of ideas related to Active Inference and the Free Energy Principle...

Follow

What do these organizations have in common?

Alt-Ac organization: doing academic activities in a non-traditional way, but organizes people who still need to accomplish traditional artifacts (culture shift).

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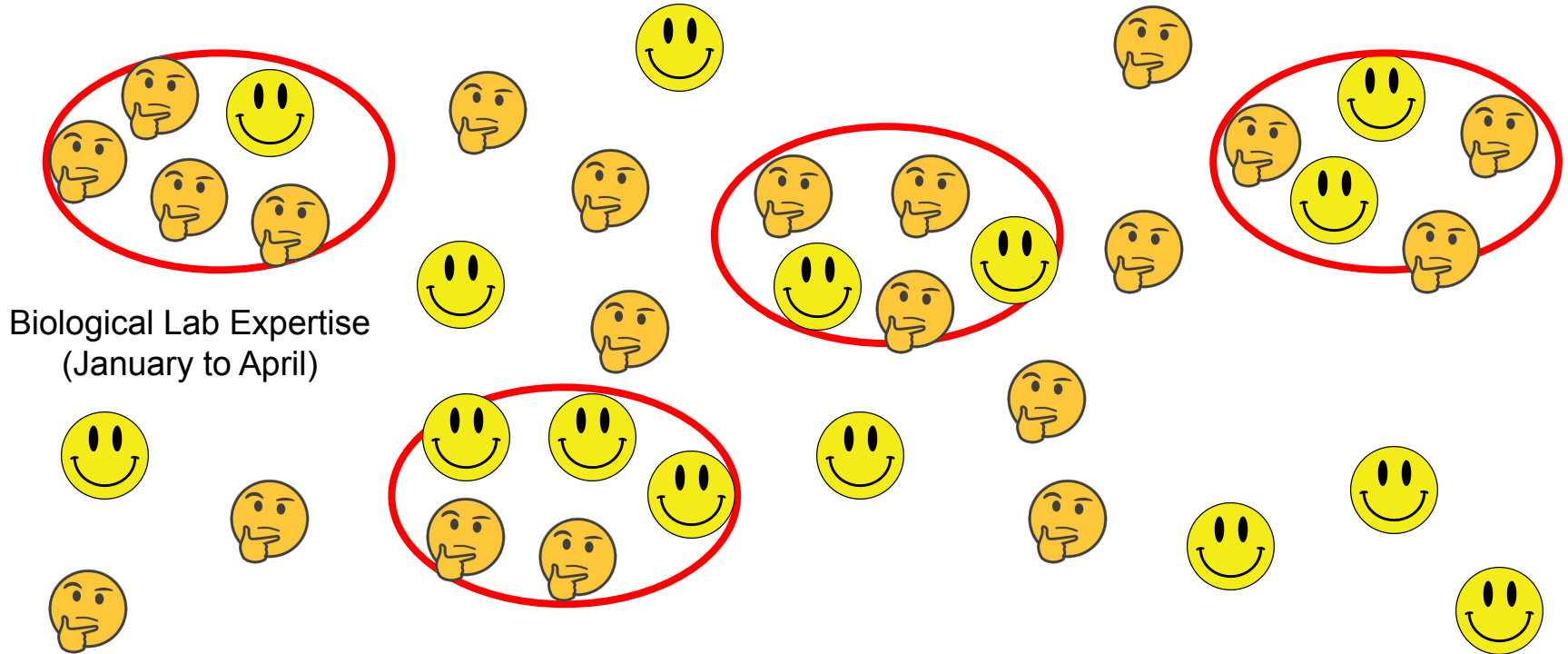
Flexible work: need to bring together people with diverse skill sets for limited time periods, people often offer fractional involvement (2-3 months at a time).

Intersection of Temporal and Skillset Flexibility

(reconfiguring expertise year-long timetable)

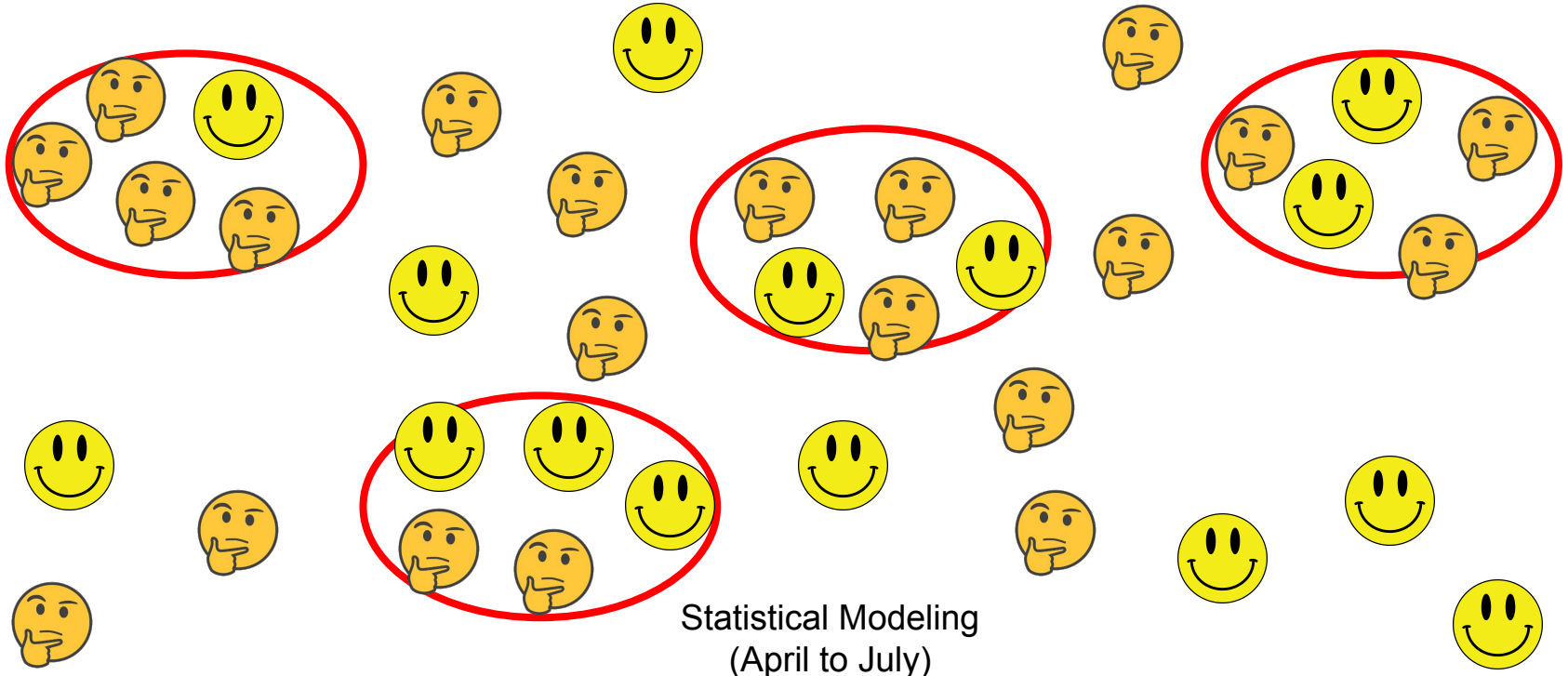
Reconfigurability of Expertise

Optimists and Pessimists



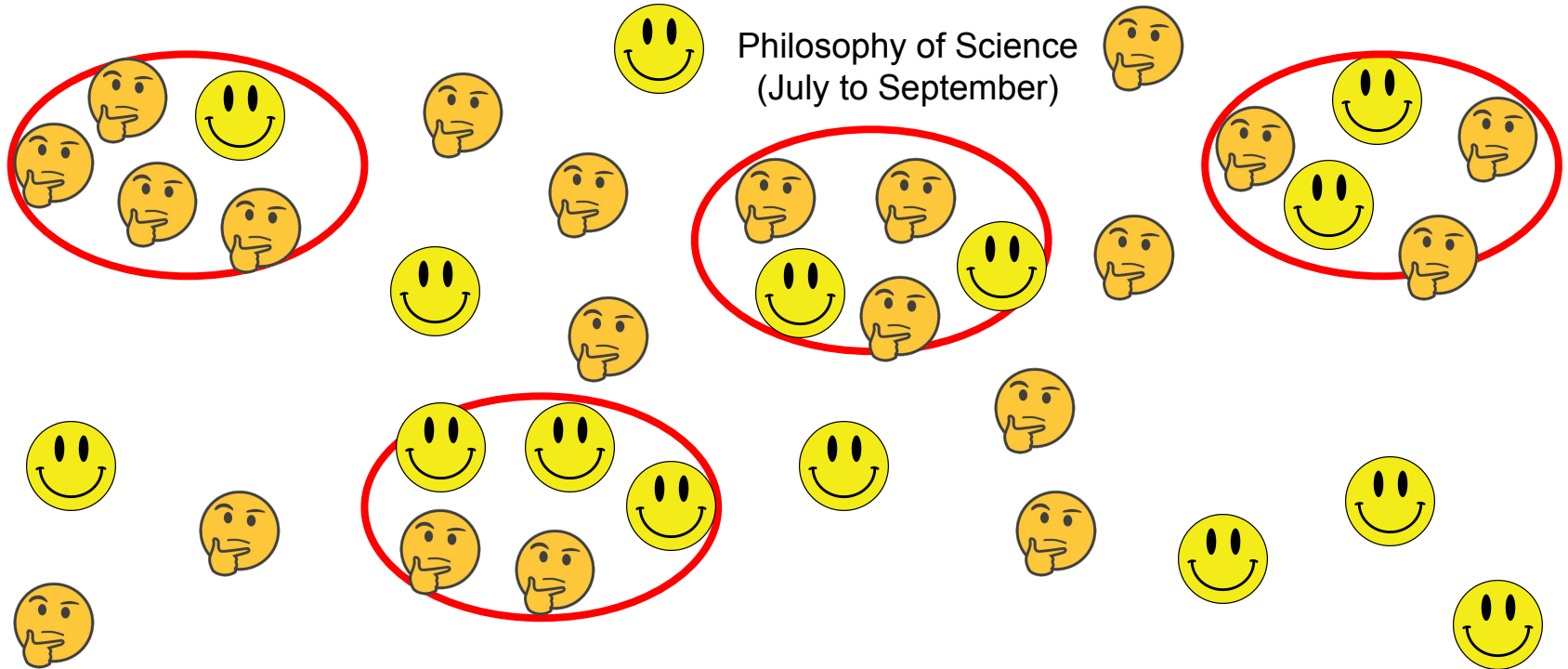
Reconfigurability of Expertise

Optimists and Pessimists



Reconfigurability of Expertise

Optimists and Pessimists



Reconfigurability of Expertise

Optimists and Pessimists

