

# Building Digital Infrastructure for the Next Era of Open Science at PLOS

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PLOS (Public Library of Science)

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Why?  
(R&D)

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More than just  
articles

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APCs are not that  
great

# PLOS Digital Platform



Architectural approach to our technology and data infrastructure consisting of coherent, well-encapsulated, and integrated software components



MACH+E  
Strangler Fig  
Loose Coupling

Good Bye,  
Monoliths!

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**Microservices based**

**API first**

**Cloud native**

**Headless**

**Event-driven/Message-based**

# ++Key Principles

- Scalability
- Dogma
- Innovate to differentiate
- Security, privacy, and accessibility baked in
- Open by default
- Instrumented and automated
- Avoid Conway's Law
- "Strangler Fig" approach
- Loose Coupling
- Emergent architecture

# First things first

Where's my data?

→ Built out highly scalable data pipelines and warehouse

Really? Yes:

→ stitch + dbt + dagster + hightouch + big query + dataplex

# Baby Steps, getting started

Hello, who's there?

→ Taking control  
of Identity

What's going on?

→ Manage Events,  
State (Workflow)

Next up: Take control of submission & provide great customer care

How can we help you?  
→ User friendly  
“publishing experience”

Let me fix that for you!  
→ (Automated)  
Submission checks, data  
capture, validation,  
enrichment ...



# At the same time: Optimize internal business processes

Why does this take so long?

→ Build robust, efficient, instrumented business processes (not just) for finance and sales ops

Where's that report again?

→ Manage data as a valuable asset

# Introducing new ways of working

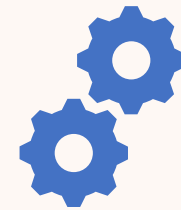


Stood up four agile, cross-functional,  
durable teams

Ownership & responsibility for both  
the long-term health & development  
of service



Focus on outcome, not output  
Accountable for impact of service



Incrementally research, design, and  
implement ideas  
Measure progress against metrics

# Questions?



Thank you for your attention!



Happy to collaborate, get in touch please!