

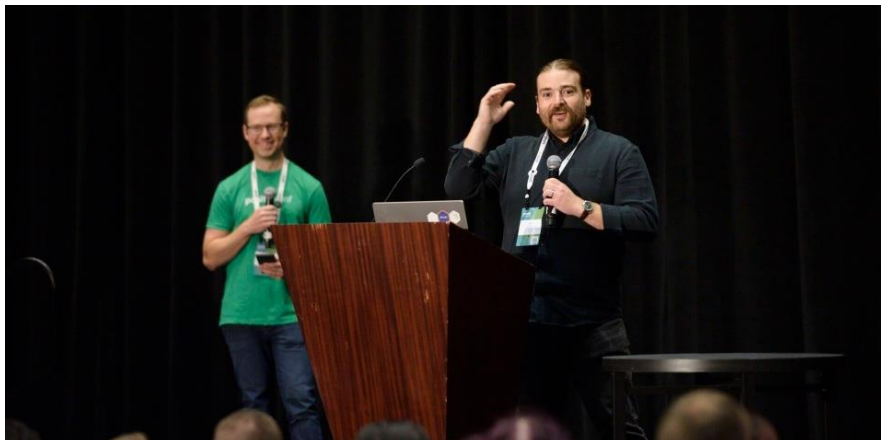


Objects in the Mirror are Closer than they Appear - *How an Organization Came Together to Accelerate Open Source Adoption*

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PHUSE US Connect
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Many organizations have been on a journey to adopt open source, how far away are you?





Director of Data Science in GSK Biostatistics

**Scientific and Adoption Lead
for Open Source for GSK R&D**

**Passionate about open source
and teaching**



Senior Director, Technical Capability Delivery in GSK Biostatistics

**Program Lead for Open
Source Adoption for GSK R&D**

**Passionate about innovation
and change leadership**

Agenda

1. Every journey begins here
2. New roads, new stories
3. Keep moving forward
4. Let the journey guide you



The Strategic Imperative

The “Why” behind open source adoption

Why Open Source and Why Now?

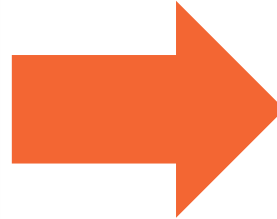
Industry Evolution – Pharmaceutical industry moving this direction

Strategic Shift – Desire to leverage innovation and collaboration of open source ecosystems

Industry Collaboration – Organizations like PHUSE, R/Pharma, CDISC, Pharmaverse, R Consortium, etc. working together towards standards aligned workflows

Proprietary Risks – Risks of using proprietary platforms and being “locked in”

Regulatory Acceptance – Increasing acceptance of open-source languages and modern formats like dataset JSON by regulatory bodies



Leadership Commitment

- ✓ Biostatistics leadership committed to “50% (stretch 70%) open source by end of 2025.”
- ✓ All new tools must be built using open-source languages





STAR is GSK's R Adoption Program across R&D

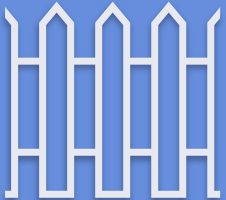
Structuring STAR and the Transition

Governance and values



Governance Model

- Established for clarity and rapid alignment, reducing ambiguity, friction, and distance.
- **Goal: Create a coalition for change, not just a program.**



Guardrails

- Open Source Exemption Process - Formalized when *not* using R/open source was acceptable (e.g., ongoing studies, high complexity, missing capabilities).
- **Goal: Provided clarity, fairness, and a structured way to manage risk, accelerate adoption by defining expectations.**

Core Values

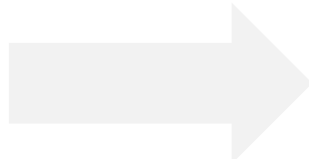
- **User focused:** No tasks unless it impacts a user
- **Fast:** Quick actions and result oriented
- **Sustainable:** STAR Program is a vehicle that sets up organizations for long term self sufficiency

Results: Strong North Star to allow for easy prioritization

Meeting People Where They Are

Support for the journey

Identified early the need
for significant support
and enablement of our
users across R&D



5 Large Support Programs

1

Quality R
Environments

2

R Focused
Hypercare
(STARburst)

3

Grassroot
Communities
and Forums

4

Targeted
Training

5

Altair SAS
Language
Compiler (SLC)

STARburst Program: First 3 Months

Hyper-care support for the pipeline

- **Aims:**
 - Support STAR and the Biostatistics R Adoption Objective
 - Enable skills development in the pipeline via real-time mentoring/support model
 - Identify skills, tools, resource gaps
- **Outcomes by the numbers:**
 - **64 blog posts (posted daily)**
 - Topics driven by the pipeline, featuring case studies and tricks/tips
 - 821 unique viewers (~90% returning)
 - 16004+ views
 - Most popular: SAS to R with GenAI
 - **58 requests (~1 request per day)**
 - CP (27), Non-Clinical Stats (6), Clinical Stats (22), RWD (1), SDSIH (2)



Following strong engagement in the first three months, STARburst evolved into a **permanent support structure**.

Technical Enablement for Supporting Users

Giving users technical solutions they can trust

Controlled R Environments

Build trust with users in open source and enable the shift from "experimenting" with open source to "production" in open-source languages.

Parquet

Moving to open source requires a future proof, open-source standard data file format – an "aha" moment for efficiency, speed, and interoperability.

Altair SLC

What do we do with legacy code? We offer an alternative for accelerating migration – deployed to production after successful multi-phase PoC.

Allowed us to move to open source powered clinical trial reporting and submissions

Human Engine Behind Acceleration

Transformation is a people effort

Collaboration is Key: Success is rooted in how teams step forward

Clinical Reporting
Teams with Ambitious
Goals

Clinical Programming
SMEs built and shared
practical guidance

Data Management
partnered on transition
from data acquisition to
submissions

Business and Tech
Teams working
together on
requirements and
support

Tech Teams
responding quickly to
environment issues

R Communities popping
up throughout R&D to
provide peer support

Clear and Frequent Communication

What We Achieved

Insights for others on a similar journey

Measurable Progress

70%+

Clinical Reporting
code in R

200+

STARburst
support requests

**Fit for purpose R
environments** enabling
both GxP and non-GxP work

Key Insight: These achievements happened because teams, once aligned, realized they were already much of the way there.

Beyond Metrics: Teams are "owning" R – contributing packages, sharing workflows, and building lasting communities.

Lessons for the Community

Insights for others on a similar journey

1. **Ambition & Pragmatism:** Set ambitious timelines but account for realities and team readiness.
2. **Bridging Tools as Accelerators:** Tools accelerate the transition with confidence.
3. **Community Over Documentation:** A strong community is the backbone of open source adoption; peer support drives behavior change.
4. **Transparency Builds Trust:** Clear communication reduces fear, keeps teams informed, and aligns everyone through uncertainty.
5. **Momentum is a Leadership Responsibility:** Explicitly reinforce milestones, celebrate progress, and provide clear framing for challenges.

5 Lessons for Others on the Journey







Questions?



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