



Paper LI08

R-Burst: The User Support Approach Shaping GSK's Open-Source Strategy

Andy Nicholls, GSK, London, UK

Shannon Haughton, GSK, London, UK



Introducing

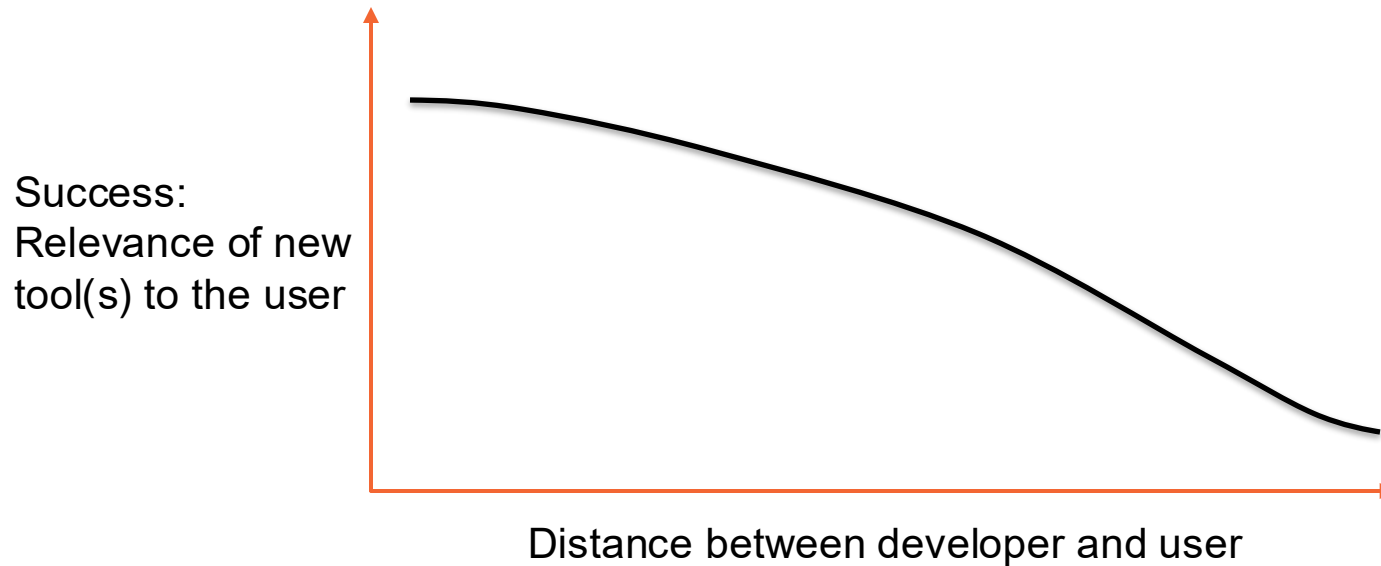
Rburst

GSK's own story about saying, “yes”

GSK

The Data Science Innovation and Engineering (DSI&E) Team

Driving an open-source culture through systems, tools, training and support



Making it Real

- New packages in the hands of users within 1-2 months
- Staff rotations into the pipeline
- Joint user initiatives



We like saying, “yes” but sometimes *need* to say no...

Making Commitments, August 2023

Biostatistics' commitments to open source



All central tools to be built using open-source languages

50% of our code to use open-source by end 2025

Making Commitments, August 2023 **New stretch objective for 2025!**

Biostatistics' commitments to open source



**All central tools to be
built using open-source
languages**

70%

**50% of our code to use
open-source by end 2025**

What if we just said yes for a while?



Let's keep it short!



What did it look like practice?



STARburst Experiment: The Program

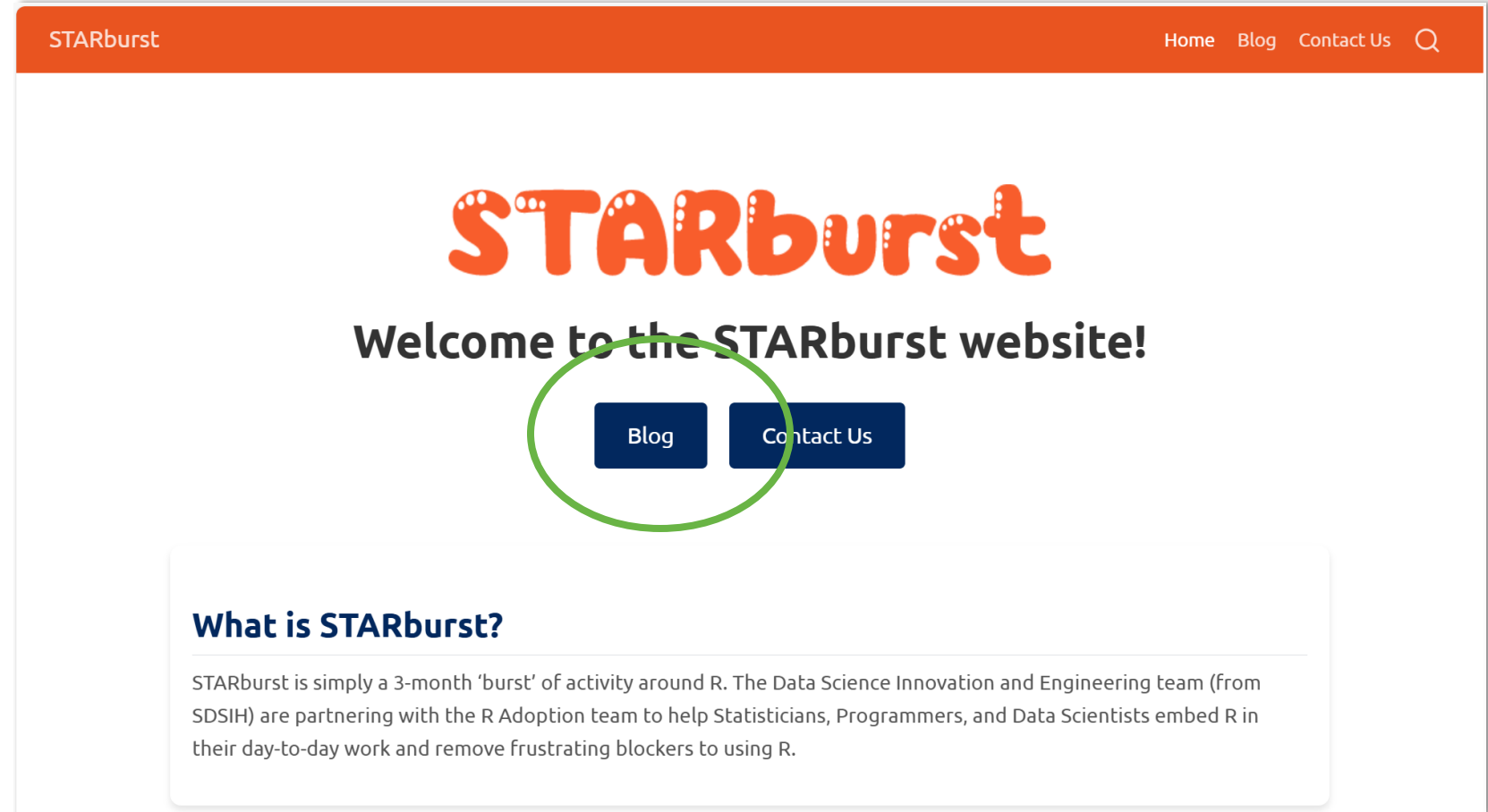
Piloting collaborative “hyper-care” for the pipeline



Feb-May 2025

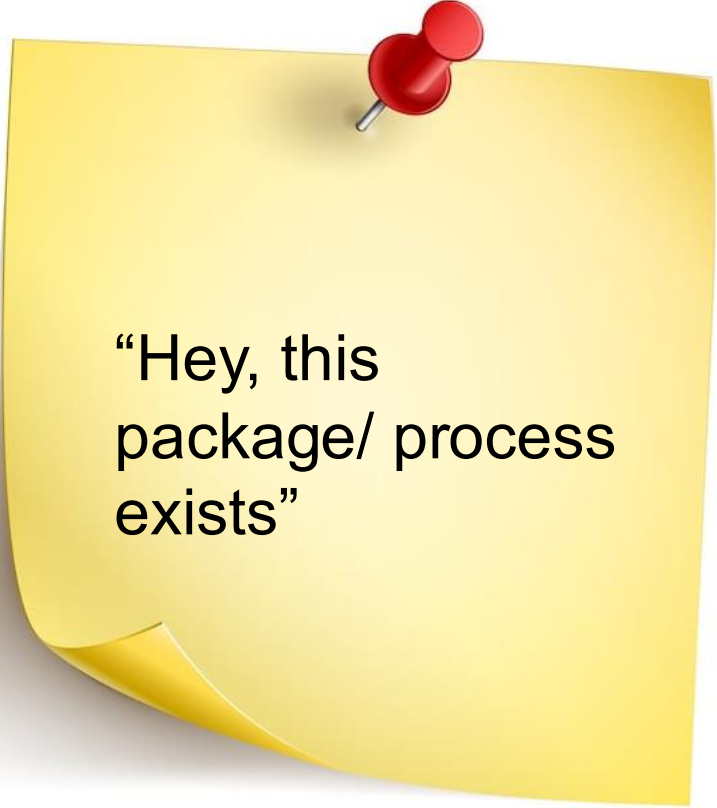
Aims:

- Support users
- Shape DSI&E’s future strategy

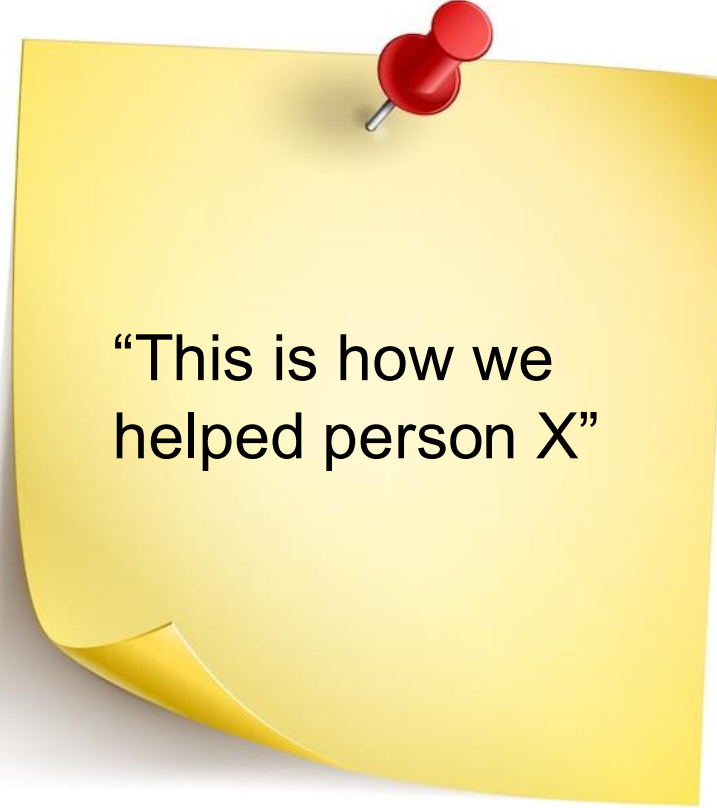


Why the blog?

Making some noise with a **daily** blog!



“Hey, this
package/ process
exists”



“This is how we
helped person X”



Rapid
documentation

Managing Requests

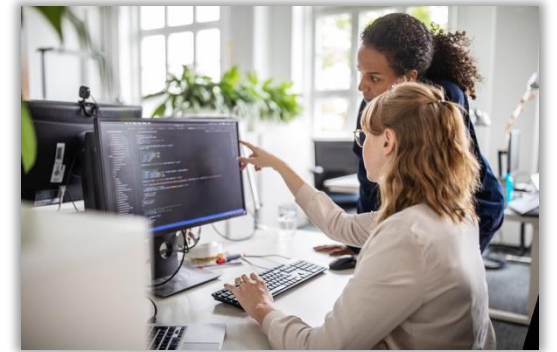
Making life easy for the users



No complex forms/tickets!



Response within 24 hours



Discussion-first mentality



STARburst team:

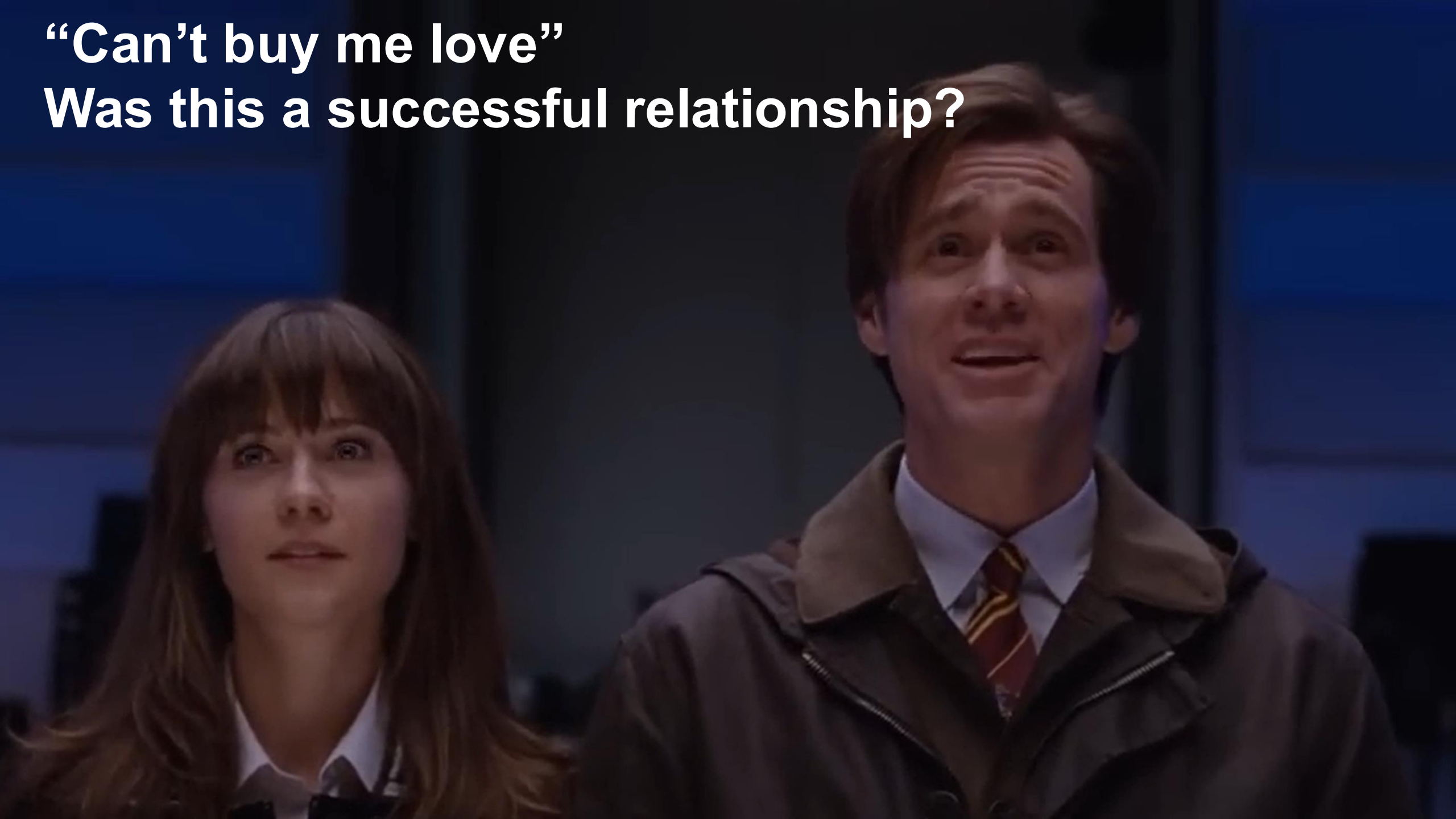
- Triage based on skills needed to answer questions
- Create an issue in GitHub for tracking
- Collect further context / background information

For the blog:

- Single, same GitHub project
- Semi-automated PR checklist

“Can’t buy me love”

Was this a successful relationship?



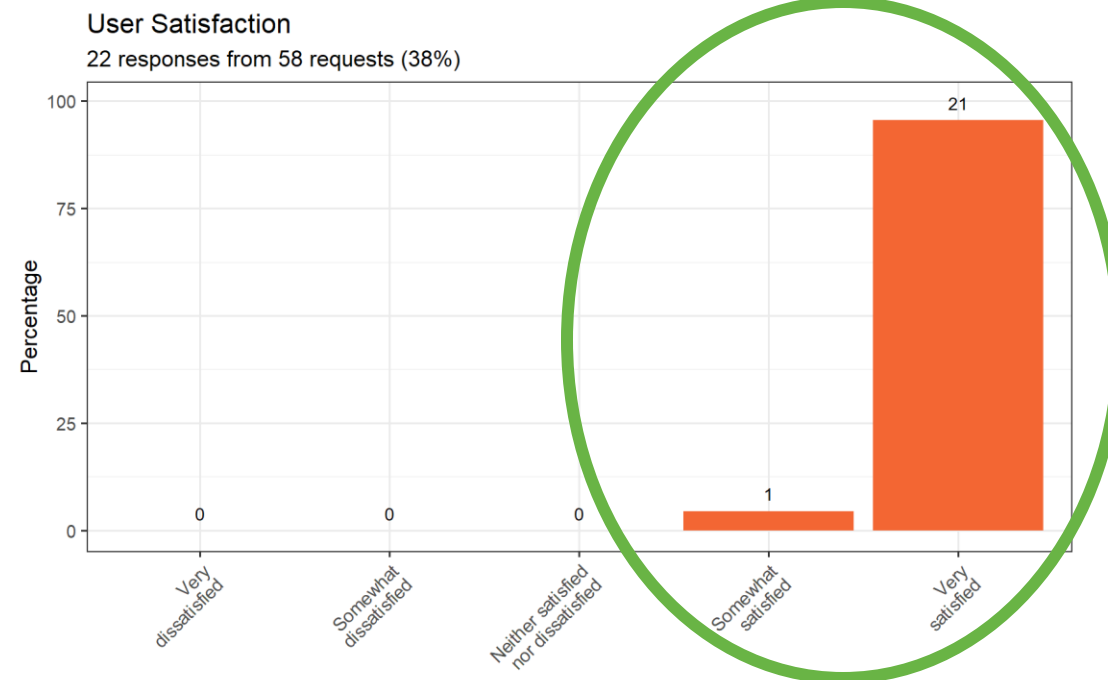
Users Share Highly Positive Experiences with STARburst

Initial feedback underscores impact of novel support model

- **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 Jules
- **58 requests (~1 request per day)**
 - CP (27), Non-Clinical Stats (6), Clinical Stats (22), RWD (1), SDSIH (2)

100% satisfaction!





**“You have to remove the covenant, it’s killing me”
Did we stop saying yes?**

Not exactly...

An evolution of STARburst

- Too popular to discontinue!
- Try to resolve in email over meetings
- Blog post frequency reduced to one every 7-10 days
- Use additional time to build up (the right) resources

The screenshot shows the 'TFL Examples in R' repository page on GitHub. The GSK logo is in the top left. The page title is 'TFL Examples in R'. Below the title is a search bar and a list of categories: Preface, Demographic Characteristics, Adverse Events, Concomitant Medications, Medical History, Treatment Assignment, Disposition, ECG, Laboratory (inc Urinalysis), General Findings, Pharmacokinetic Parameter, Pharmacokinetic Concentration, Exposure, Inclusion/Exclusion Criteria, Protocol Deviation, Study Population, Liver Event, Miscellaneous, and FAQs. The 'Overview' section on the right contains three bullet points: 1. This is a library of TFL examples separated by category. The examples are based on the display mock shells from the GSK standard library, which can be viewed [here](#). Please note that our examples may differ slightly. 2. The examples include steps for preparing, filtering and processing the dataset using the **Tidyverse** and **gt**, and generating the output table using **{gt}** for listings or **{tfrmt}** for tables. The **{pharmaverseadam}** package is used for dummy data. 3. The examples utilise some helper functions that have been developed specifically for this example library and stored within the **misc** folder in the GitHub repository [here](#). Please note that the code will not run without these functions. A large red watermark is overlaid diagonally across the page, reading '>5,500 views in September!'. Below the watermark, there is a note about running the examples, mentioning that the examples use data from {pharmaverseadam}, which is not available in the frozen environment, and that for training purposes and running the examples as-is, a non-frozen environment is required. It also mentions that the current examples are compatible with packages from the most recent frozen environment which uses a CRAN snapshot date of 2025-06-03. Specific dependencies include {tidyverse} 0.6.0, {gt} 1.0.0, {tfrmt} 0.1.3, {pharmaverseadam} 0.1.0, and {docorator} 0.3.0. A final note states that other package updates may be required to enable this installation and that users should follow any prompts provided in their console.

Happy ending?



Conclusion / Learnings

3 months+ saying, “yes”

- This experiment has helped further strengthen the bond we have with our R users
- Taking time out from development helped our team prioritise the right bugs/features/enhancements and identify new innovation opportunities
- Effective support is best driven by technical experts!

Further Acknowledgements

Thanks to the following

- Phuse / the panel here for accepting this talk
- GSK for allowing me to continue to present our latest innovations
- The DSI&E and STARburst team for their commitment to making the STARburst idea a reality
- To all GSK's Statisticians, Programmers, and Data Scientists for embracing open-source
- To Netflix* - Drafting a presentation around a film you only watched once, 12 years ago, is challenging!

*Other streaming platforms are available. But 'Yes Man' was only freely available on Netflix at the time of writing!

A large, diverse audience is seated in a theater, facing forward. In the foreground, a man in a brown jacket is waving his hand. The audience is seated in rows of beige chairs. In the background, there are three large posters. The left poster is titled "YES! IN THE NEW NO!" and features Terrence Bundley. The middle poster is titled "YES TO VICTORY" and shows a group of people. The right poster is titled "YES TO ADVENTURE" and shows a person in a small airplane. The word "Questions?" is overlaid in large white text in the center of the image.

Questions?