



Fight the Power: Supporting Study Teams with Niche R Packages for Delivery

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Once an Open Source environment is qualified and there is nothing more you need to complete your studies... right?



**How do we enable study teams to
use the R Packages they need for
their studies?**



**Director of Data Science in GSK
Biostatistics**

Lead R Enablement

**Passionate about learning and
teaching**



**Associate Director of Biostatistics
Programming**

**Compound Programming Lead
Utilizing R**

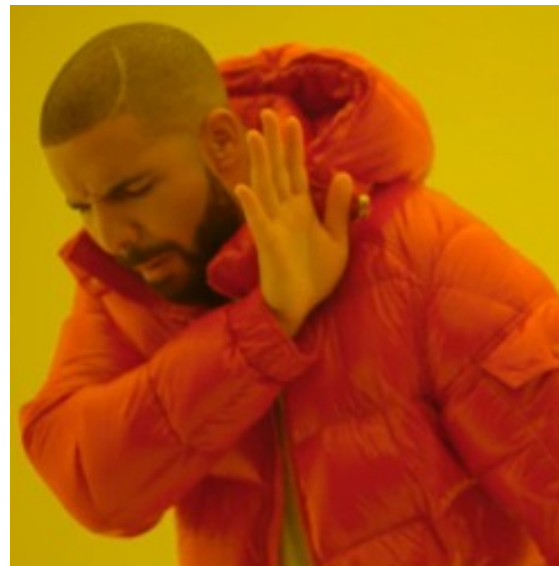
**Ardent supporter of R
implementation within Clinical
Programming**

**In 2020 GSK Biostatistics decided to
make R a primary language for
statistical reporting**

In 2023 GSK Biostatistics qualified its R Environment

AccelerateR, an R support team that rotates through study teams to put learnings into practice, started to work with Study Teams.

Biggest question we dealt with...how do I add this package to the Frozen R Environment.



**Use the
old
version of
this R package**

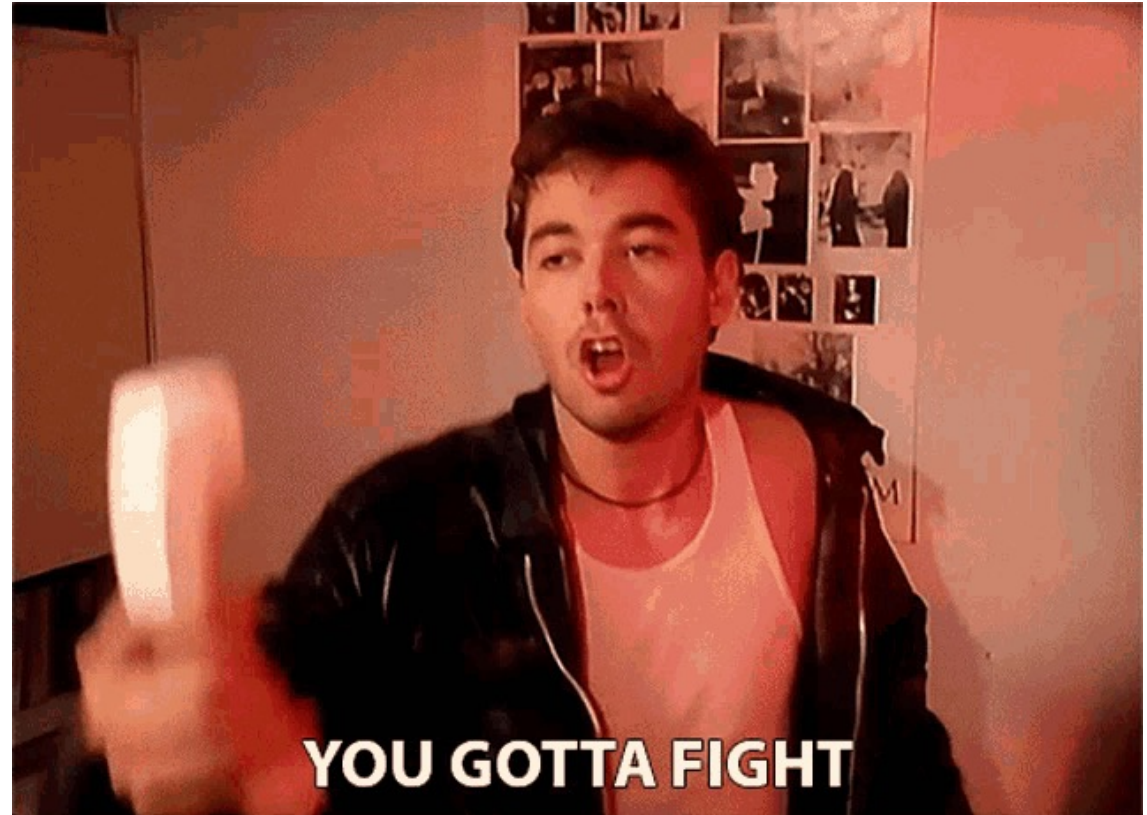


**Use the
new
version of
this R package**

So...how did we enable people to add packages to a validated environment

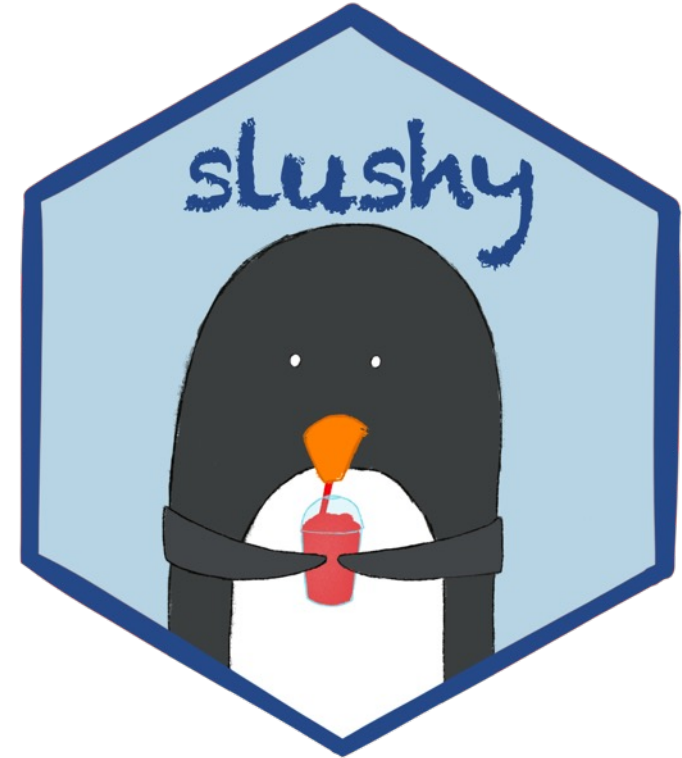
We leveraged open-source tools and created our own process

We had to *fight* for our right to use *R* packages that make sense for our studies, not defined by a central governance team



{slushy} is a wrapper built on {renv} to mirror a controlled R environment through CRAN snapshots and an agreed set of packages

We use it to replicate our validated environment and then add the necessary package to the environment



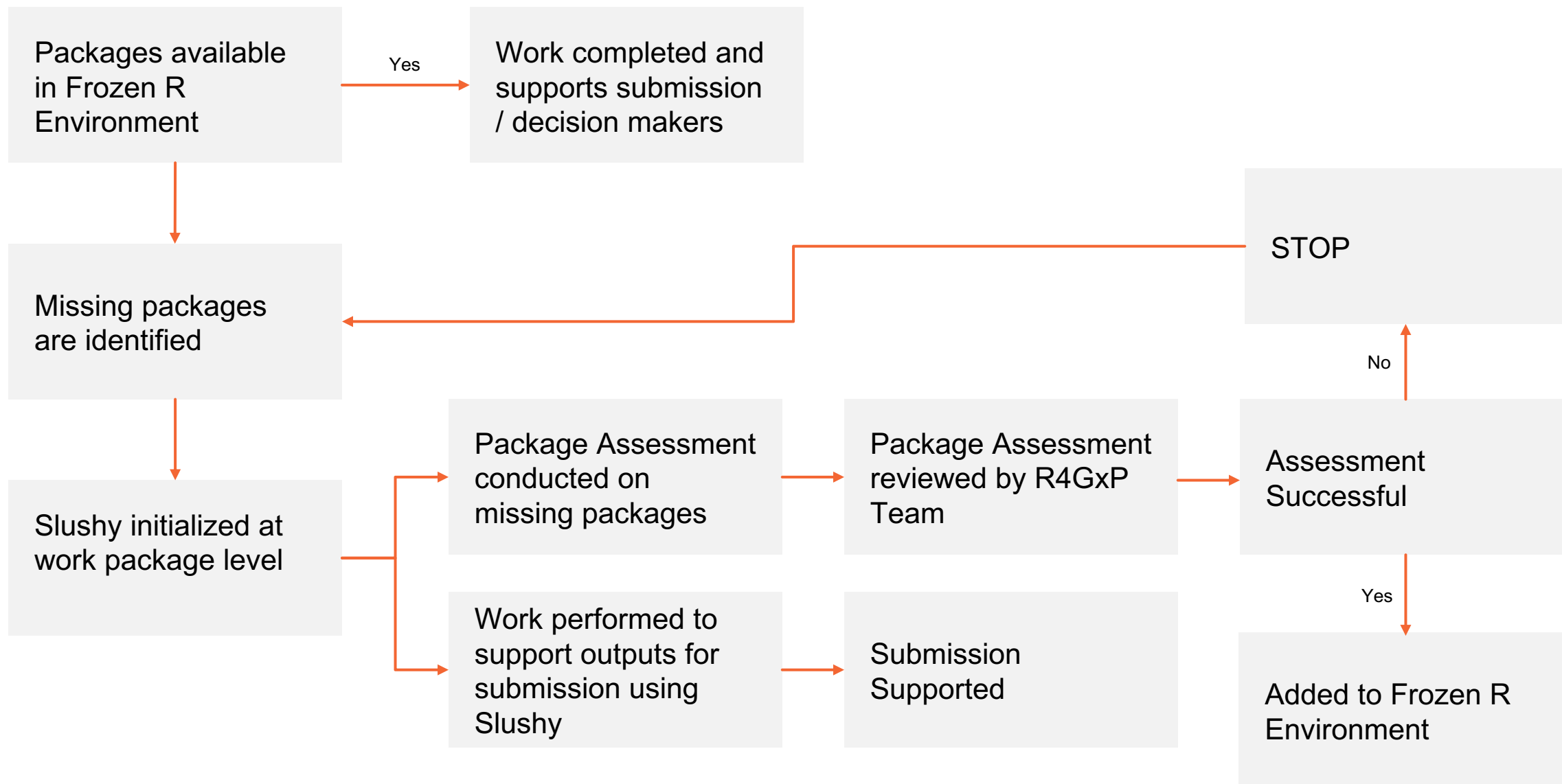
Oh no {renv}.....

```
install.packages("slushy")  
library(slushy)
```

```
slushy_init(slushy_init(config = "path.yml"))
```

```
slushy_add("packagename")
```

**Found a tool it works all
done....right!?**



**Remove burden from
central R4GxP
governance team...**

**Gives study teams
the ability to add
packages that makes
sense for their study
and manage risk...**



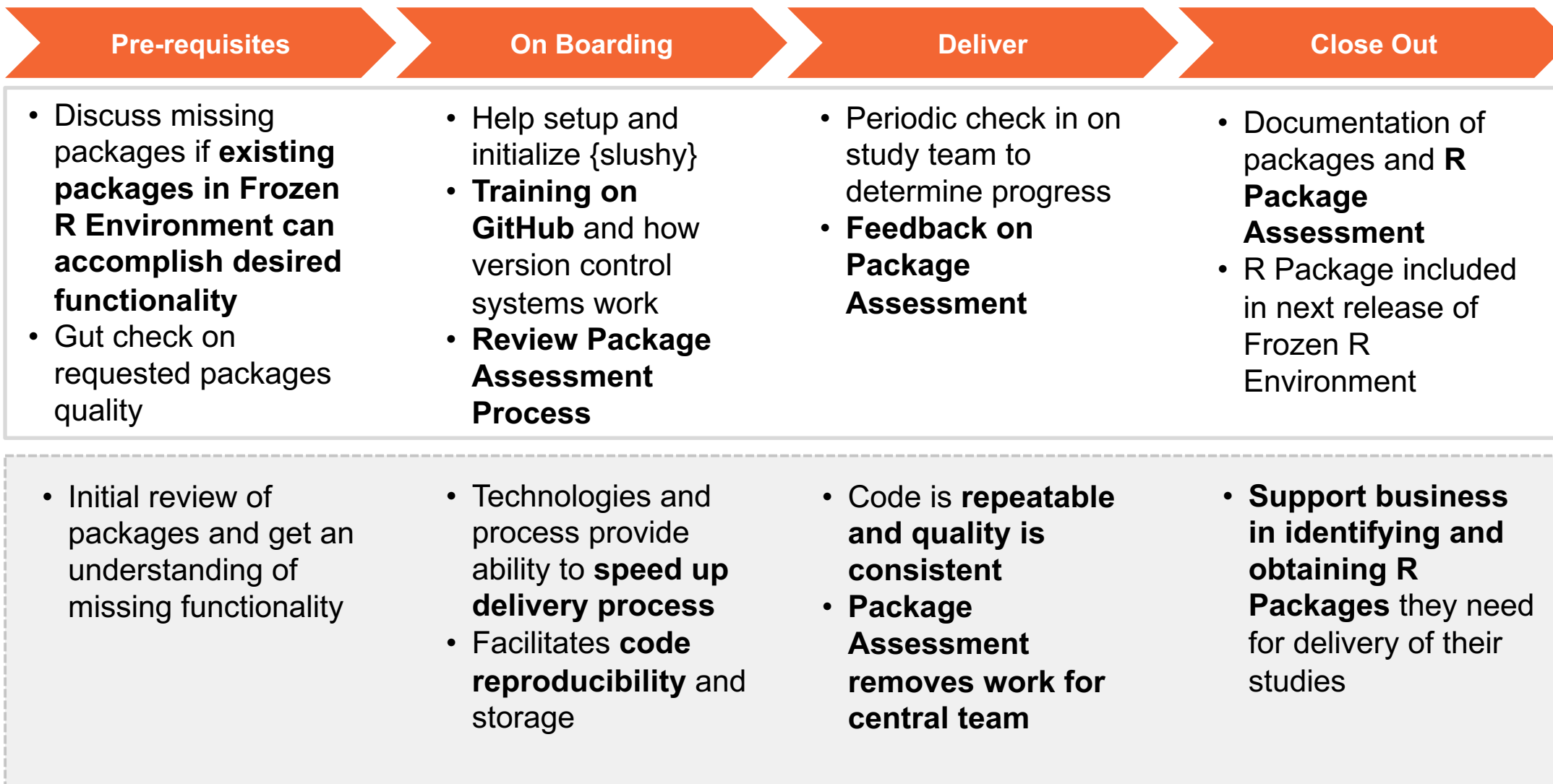
How do we support teams in this process?

We used an existing team in GSK.

Two years ago, we created the AccelerateR team which is a small agile pod that sits side by side with study teams to train them on R.

AccelerateR is focused on supporting and mentoring individuals in Biostatistics.

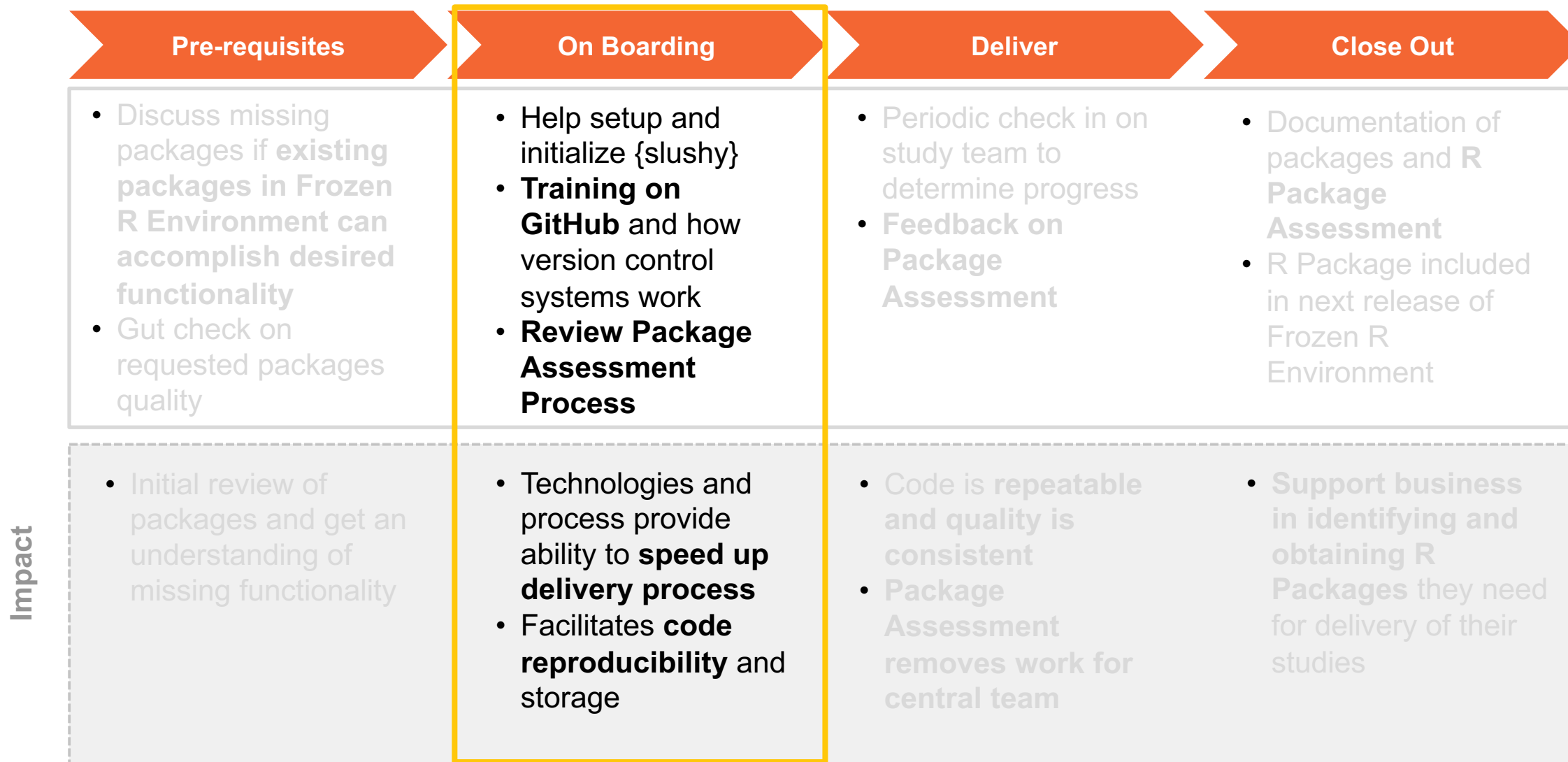






Impact

Pre-requisites	On Boarding	Deliver	Close Out
• Discuss missing packages if existing packages in Frozen R Environment can accomplish desired functionality • Gut check on requested packages quality	• Help setup and initialize {slushy} • Training on GitHub and how version control systems work • Review Package Assessment Process	• Periodic check in on study team to determine progress • Feedback on Package Assessment	• Documentation of packages and R Package Assessment • R Package included in next release of Frozen R Environment
• Initial review of packages and get an understanding of missing functionality	• Technologies and process provide ability to speed up delivery process • Facilitates code reproducibility and storage	• Code is repeatable and quality is consistent • Package Assessment removes work for central team	• Support business in identifying and obtaining R Packages they need for delivery of their studies





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**Open-Source adoption is over the hump –
we are comfortable with using the tools for
delivery**

**Study Teams are empowered to influence
open-source governance teams!**

Study teams know
what tools and R
Packages they need –
so it's time to *fight
the power* and feel
empowered to
influence central
governance teams

