

Building an R-centered Reproducible Research Framework

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The (Recognition of the) Reproducibility Crisis is Upon Us

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EDITORIAL

Progress on reproducibility

Jeremy Berg

+ See all authors and affiliations

Science 05 Jan 2018:
Vol. 359, Issue 6371, pp. 9
DOI: 10.1126/science.aar8654

Cell Metabolism

CROSSTALK | VOLUME 24, ISSUE 3, P348-360, SEPTEMBER 13, 2016

Never Waste a Good Crisis: Confronting Reproducibility in Translational Research

Daniel J. Drucker [person](#) [email](#)

 **PLOS** | BIOLOGY
FIFTEENTH ANNIVERSARY

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Reproducible research practices, transparency, and open access data in the biomedical literature, 2015–2017

Joshua D. Wallach, Kevin W. Boyack, John P. A. Ioannidis [email](#)

Published: November 20, 2018 • <https://doi.org/10.1371/journal.pbio.2006930>

The Washington Post
Democracy Dies in Darkness

Science

No, science's reproducibility problem is not limited to psychology

By [Joel Achenbach](#)
August 28, 2015

 **nature**
International journal of science

Special | 18 October 2018

Challenges in irreproducible research

Addressing Reproducible Challenges

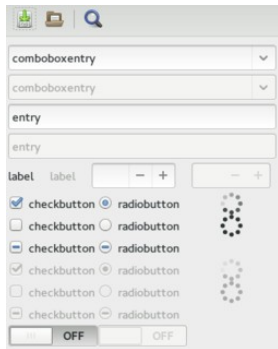
Missing Files



Immutable Storage



Untracked GUI Interactions



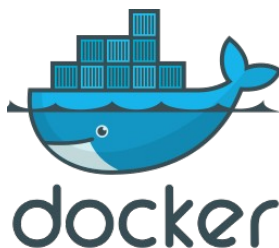
Full Scripting



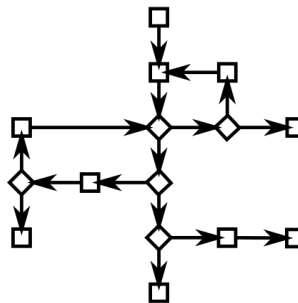
Retired Hardware



Virtualization



Untracked Modifications



Version Control



Absent Services



Extensive Serialization

```
ls -lh \
*.rds \
*.json \
*.sqlite \
*.tsv \
```

Researcher Turnover



Documentation

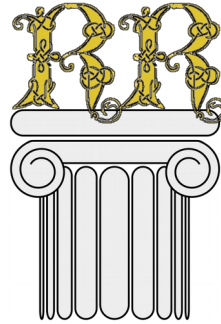


Successes & Lessons

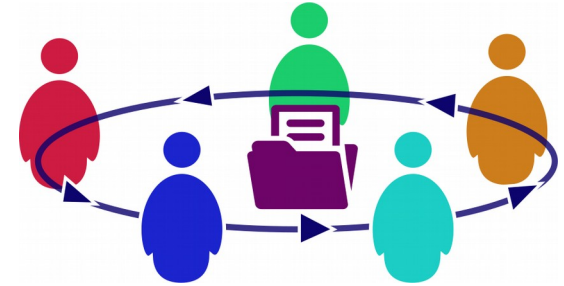
**Fully Adopted by Team
of 50+, Still Evolving**



Culture is Critical



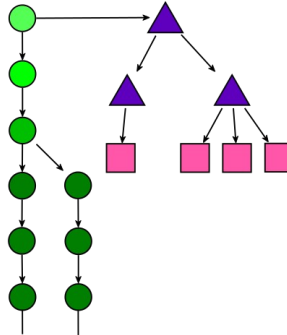
**Standards Enhance
Collaboration**



**Shared Code
Accelerates Research**



**Complete Traceability
on all Analyses**



More Info on GitHub



[maptracker/EARL-2018](#)