

# Assessing Reproducibility when the Data is Confidential

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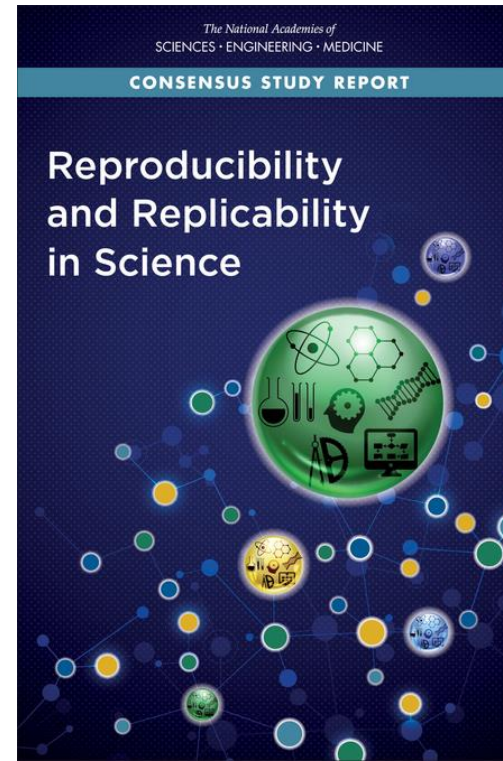
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# Replication continuum

<https://doi.org/10.17226/25303>



## Reproducibility

- Narrow Replication (Pesaran 2003)
- Pure Replication (Hamermesh 2007)
- Verification (Clemens 2015)

## Replicability

- Wide Replication (Pesaran 2003)
- Statistical Replication (Hamermesh 2007)
- Reproduction/Reanalysis (Clemens 2015)

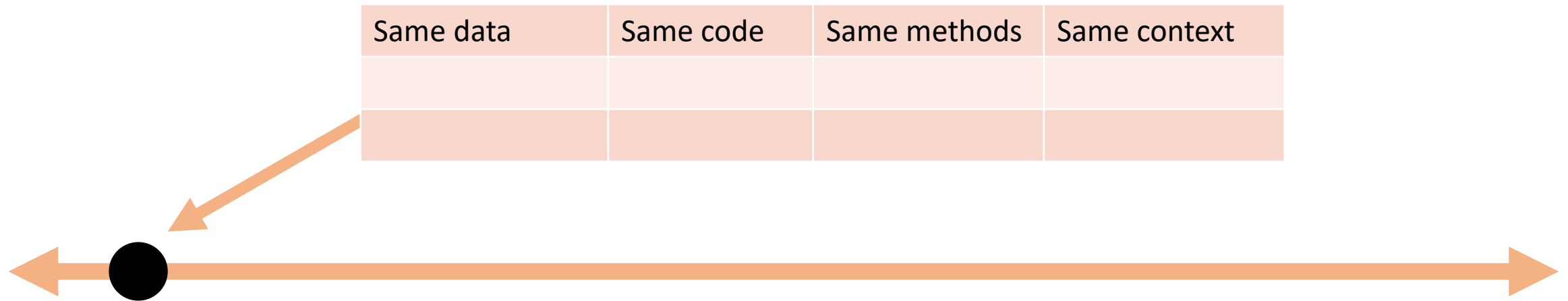
## Generalizability

- Wider Replication (Pesaran 2003)
- Scientific Replication (Hamermesh 2007)
- Reanalysis/Robustness (Clemens 2015)





# Replication continuum



## Reproducibility

- Narrow Replication (Pesaran 2003)
- Pure Replication (Hamermesh 2007)
- Verification (Clemens 2015)





# AMERICAN ECONOMIC ASSOCIATION

## American Economic Review



The *American Economic Review* is a general-interest economics journal. Established in 1911, the AER is among the nation's oldest and most respected scholarly journals in economics.

## American Economic Review: Insights



*AER: Insights* is designed to be a top-tier, general-interest economics journal publishing papers of the same quality and importance as those in the AER, but devoted to publishing papers with important insights that can be conveyed succinctly.

## Journal of Economic Literature



The *Journal of Economic Literature* (JEL), first published in 1969, is designed to help economists keep abreast of and synthesize the vast flow of literature.

## Journal of Economic Perspectives



The *Journal of Economic Perspectives* (JEP) fills the gap between the general interest press and academic economics journals.

## American Economic Journal: Applied Economics



*American Economic Journal: Applied Economics* publishes papers covering a range of topics in applied economics, with a focus on empirical microeconomic issues.

## American Economic Journal: Economic Policy



*American Economic Journal: Economic Policy* publishes papers covering a range of topics, the common theme being the role of economic policy in economic outcomes.

## American Economic Journal: Macroeconomics



*American Economic Journal: Macroeconomics* focuses on studies of aggregate fluctuations and growth, and the role of policy in that context.

## American Economic Journal: Microeconomics



*American Economic Journal: Microeconomics* publishes papers focusing on microeconomic theory; industrial organization; and the microeconomic aspects of international trade, political economy, and finance.





# AEA Data & Code Availability Policy (2019)

- Access to the data and code must be clearly and precisely documented and is non-exclusive to the authors.
- Authors ... must **provide**, **prior to acceptance**, the data, programs, and other details of the computations **sufficient to permit replication**, as well as **information about access to data and programs**.
- **We test that.**





# Current efforts at the AEA

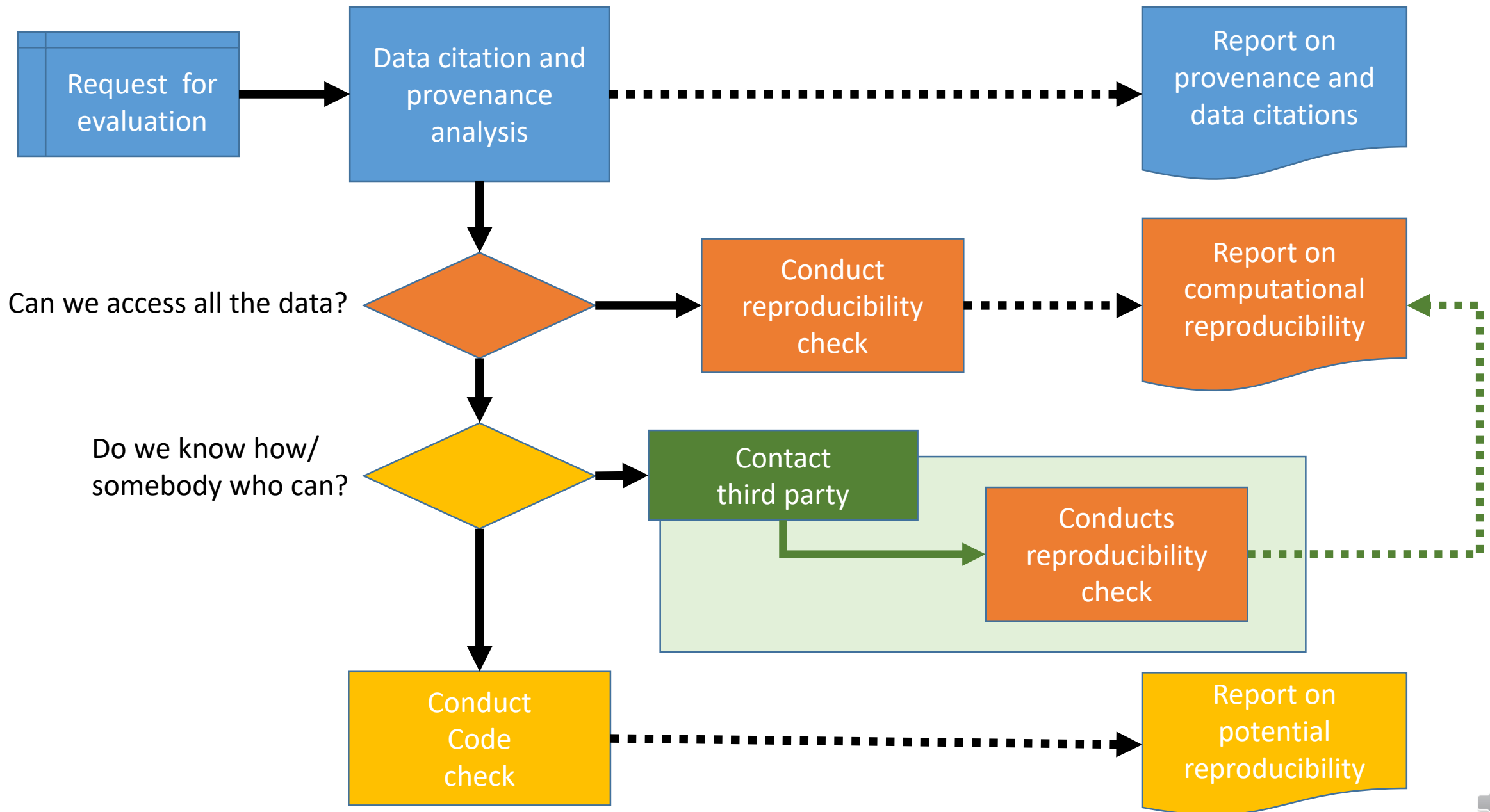
## Pre-emptively improve code archives

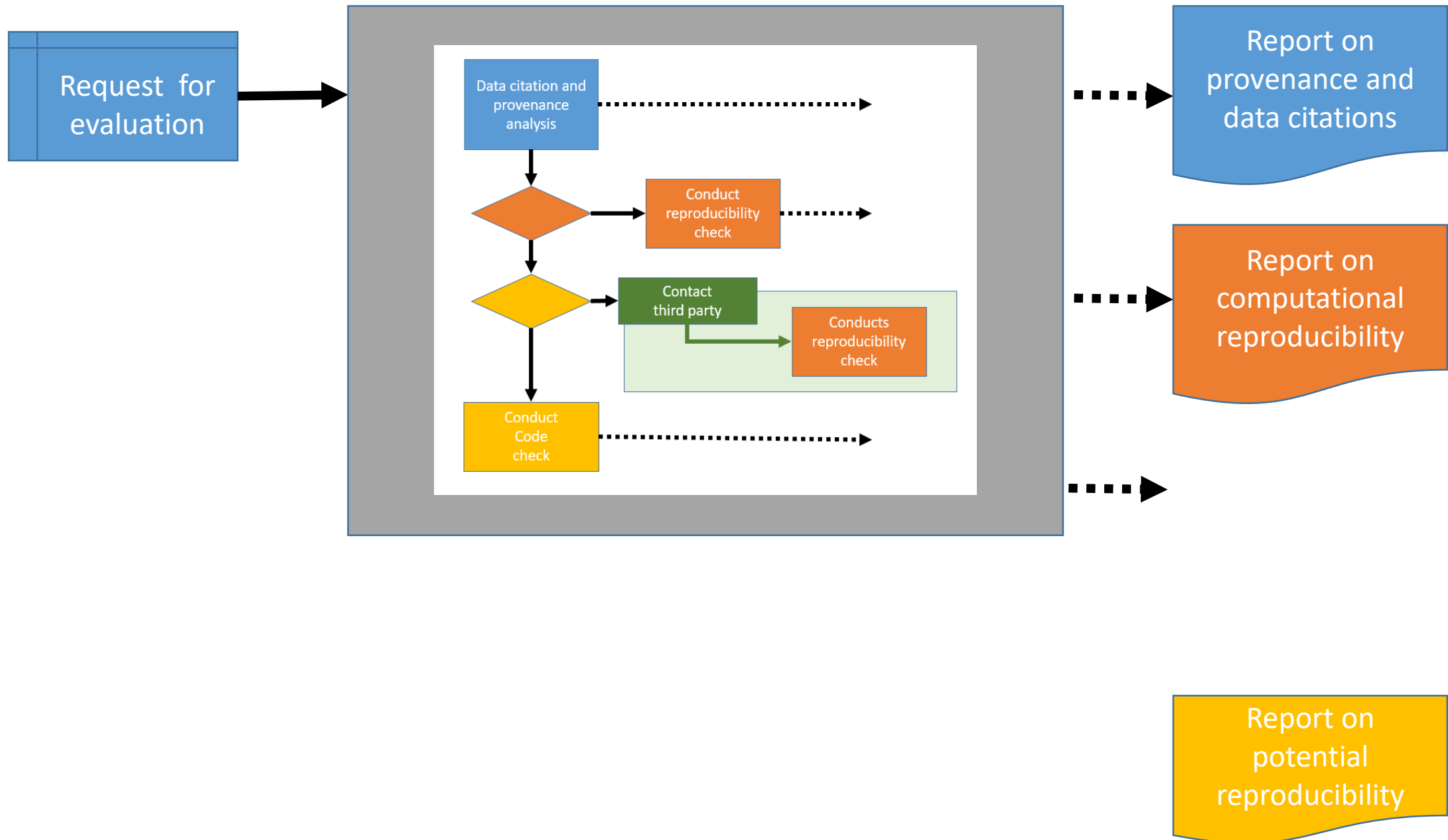
- By conducting reproducibility checks when we can
  - Request data when not freely downloadable
- By working with groups or people that conduct reproducibility checks when we cannot

**Proprietary and confidential data pose a challenge**

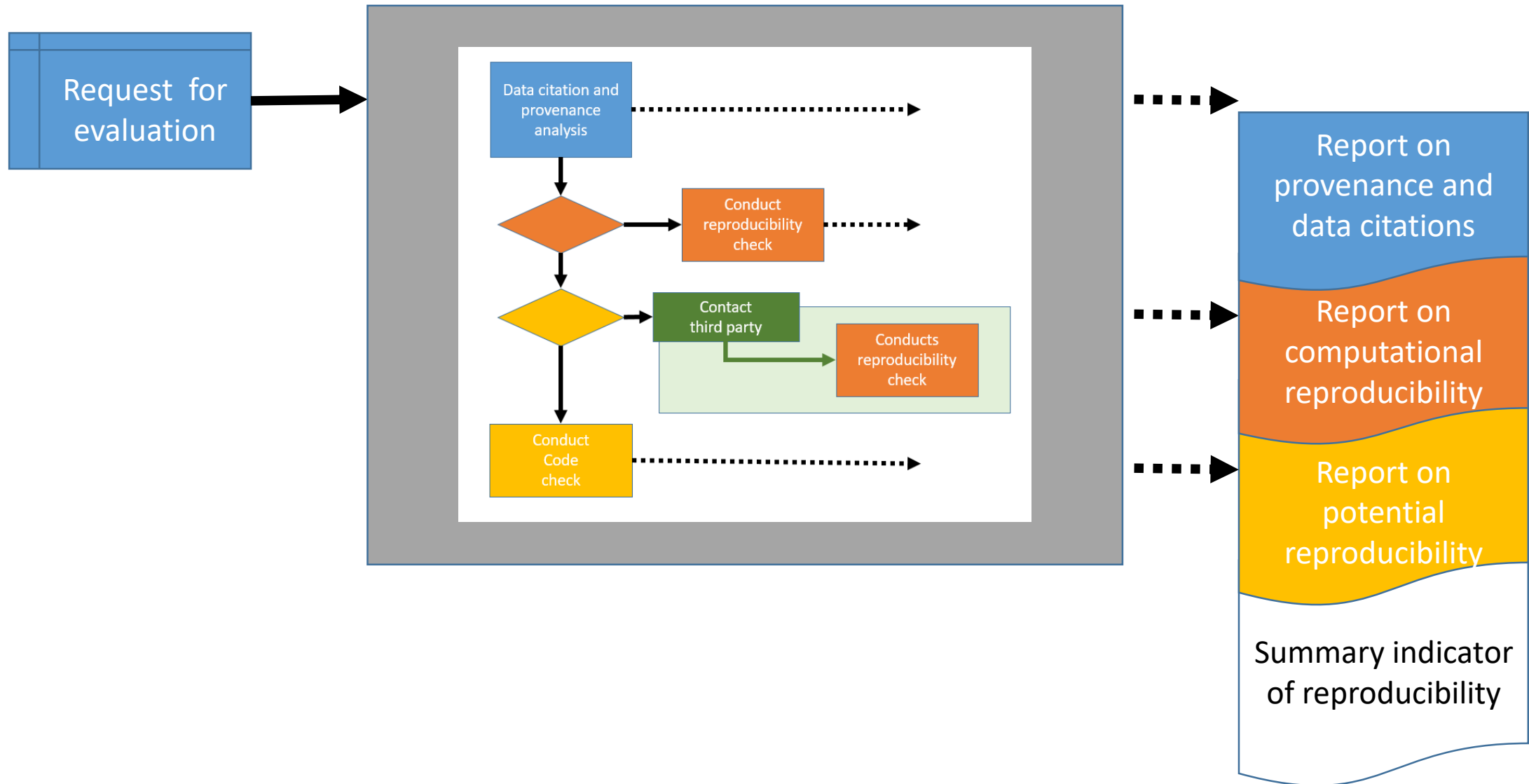
**How do you check code when the data access is complex?**





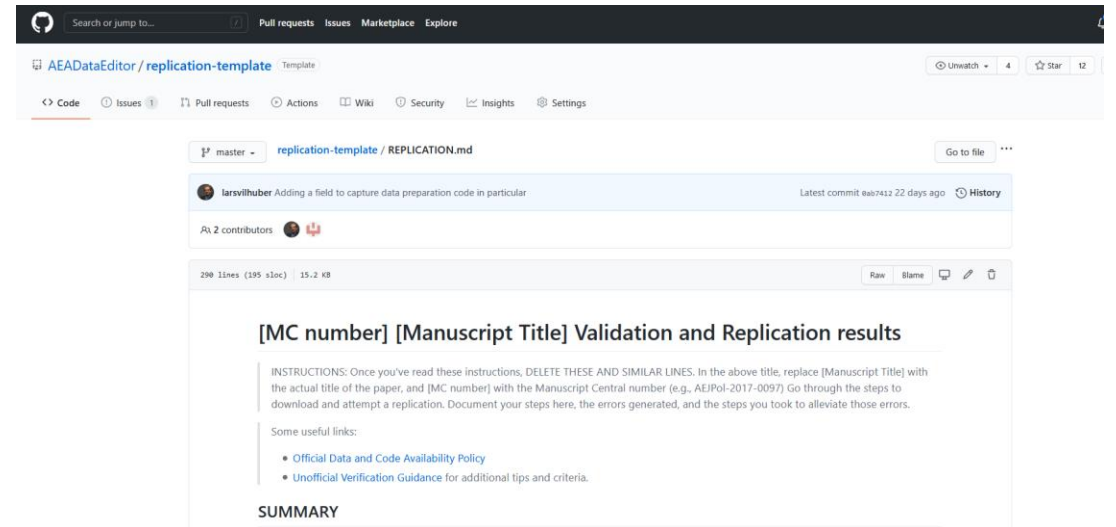
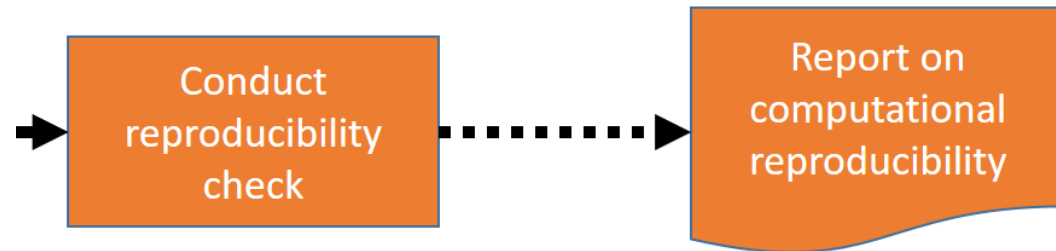






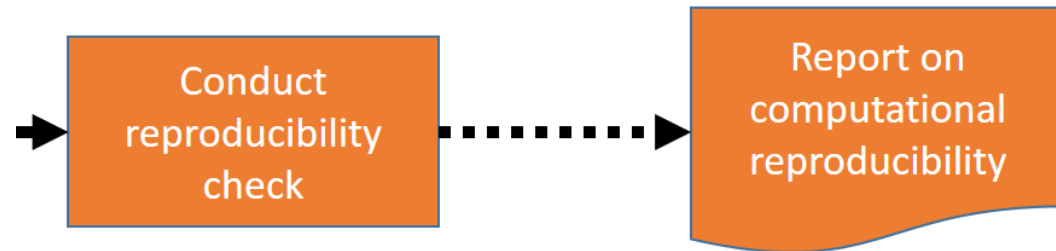


# What is the reproducibility check?





# What is the reproducibility check?

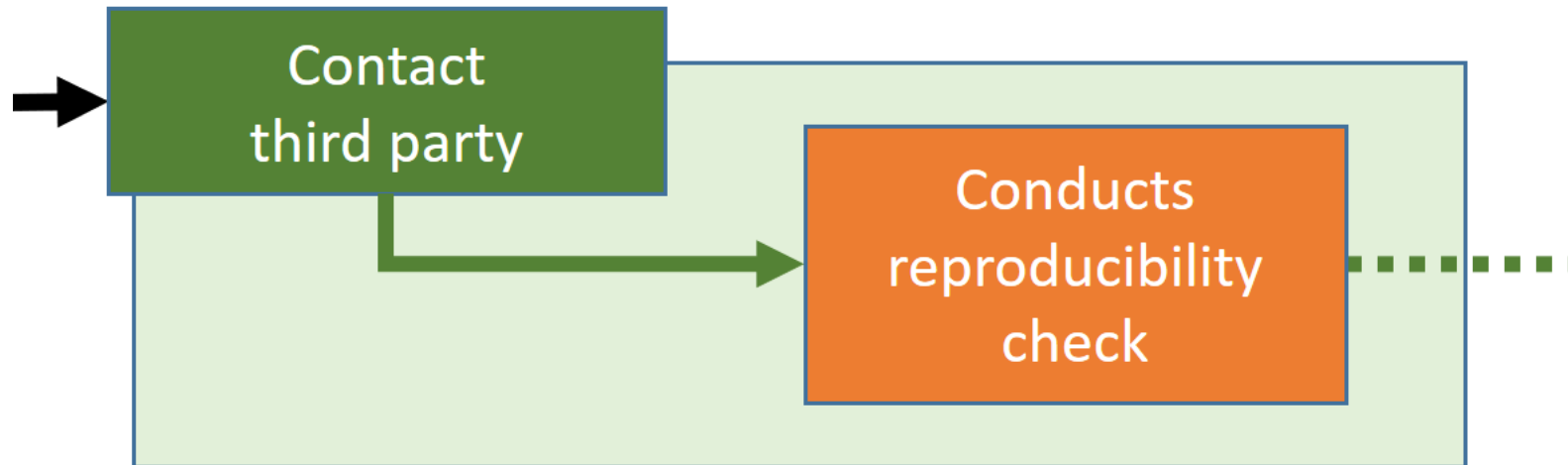


- Data checks
- Code description
- Requirements
  - As stated by author
  - As encountered by replicator
- Verbose description of steps to replicate
- Findings
  - Compare tables
  - Compare figures
  - Compare in-text numbers





# Who do we contact when we cannot access the data ourselves?






# Who are the 3<sup>rd</sup> parties?

- cascadi – Using confidential data!
  - DADS
  - French customs data
- Various contributors with access to confidential data
  - Authors
    - Graduate assistants
  - Their institutions
  - Network of known groups with access (less frequent)

Some other examples:

- IFAL  **cascadi**
- Fed *the first certification* (ta)
- Upj *agency for scientific* (n data)
- JCT *code & data*
- Ban A cascadi certification allows researchers to signal the reproducibility nature of their research to their peers
- IAB (German data)
- *Graduate students* at Wharton, Chicago, Yale, Wisconsin, Cornell





# How to prepare the replication package

- README

- Now ask an [RA/ colleague/](#)

## AEA Data and Code Guidance



Guidance for authors of data and code supplements for replicators.

AMERICAN  
ECONOMIC  
ASSOCIATION

That's our Protocol!

## Steps for the Third-party Replicator

- Download the author's replication archive(s) from the designated URL (public, or privately shared)
- Ensure access to any confidential files that are described in the replication archive's README
  - The replicator should consider whether a third-party person not familiar with the author's environment could reasonably rely solely on the instructions in the
- Follow the [checklist](#) to conduct the reproducibility exercise, relying exclusively on the README for instructions and guidance.
- Write a [report](#)
- Send the report to the AEA Data Editor
- Report any interactions with the author in the course of conducting the reproducibility exercise (help, assistance, clarifications)







# Social science “guild”



[https://  
social-science  
-data-editors.  
github.io/  
guidance/](https://social-science-data-editors.github.io/guidance/)







# Some resources

- <https://social-science-data-editors.github.io/guidance/>
- <https://aeadataeditor.github.io/aea-de-guidance/>
  - **template README**
  - discussion of licensing
  - data citation guidance
- German example:
  - Establishment History Panel (BHP) DOI: [10.5164/IAB.BHP7516.de.en.v1](https://doi.org/10.5164/IAB.BHP7516.de.en.v1)
- French verification service “cascad” within French RDC CASD
  - <https://www.casd.eu/en/le-centre-dacces-securise-aux-donnees-casd/certification-de-resultats-cascad-casd/>

