Research Integrity and Data Sharing in Non-Public Science and Technology Organisations

Balancing openness, ownership and the benefits of collaboration

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ROADMAP

The talk in six parts

Collaboration is transparent and sustainable only with clear rules from the outset.

I The rise of the private sector (slides 4–6) → **II** Collaboration expands (slide 7) → **III** Seven emerging issues (slides 8–14) → **IV** Solutions (slides 15–17) → **V** The role of NAFOSTED (slide 18) → **VI** Recommendations (slide 19)

We begin with the rise of the private sector. →

Resolution 57 opens a new era for private R&D

2% of GDP
R&D spending target by 2030

>60%
from non-state sources, mainly businesses

2024
Resolution 57-NQ/TW on breakthroughs in science, technology, innovation and digital transformation

2025
Law on Science, Technology and Innovation 93/2025; Personal Data Protection Law 91/2025

2026
Decrees 125 and 159/2026; Decision 2557 on scientific integrity

The policy framework is now in place. Rules on integrity and data must come first.

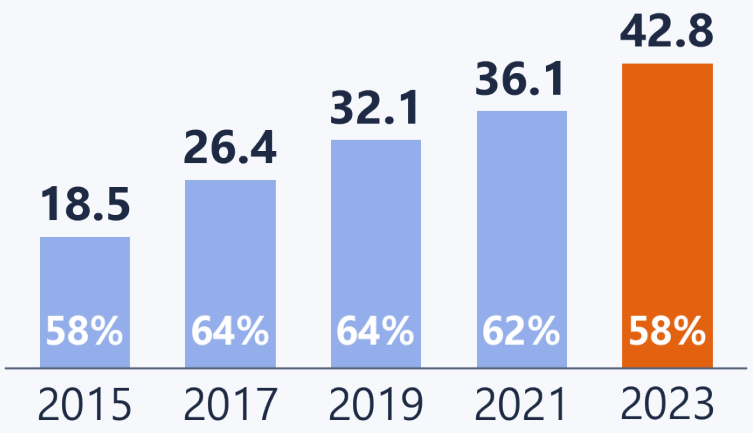
The policy framework is set. Where does the money come from? →

Source: Resolution 57-NQ/TW (2024); Laws 91 and 93/2025/QH15; Decrees 125 and 159/2026/NĐ-CP; Decision 2557/QĐ-BKHCN (2026)

Businesses are already the main funders of R&D, in Vietnam and worldwide

Vietnam's R&D spending has more than doubled (VND trillion)

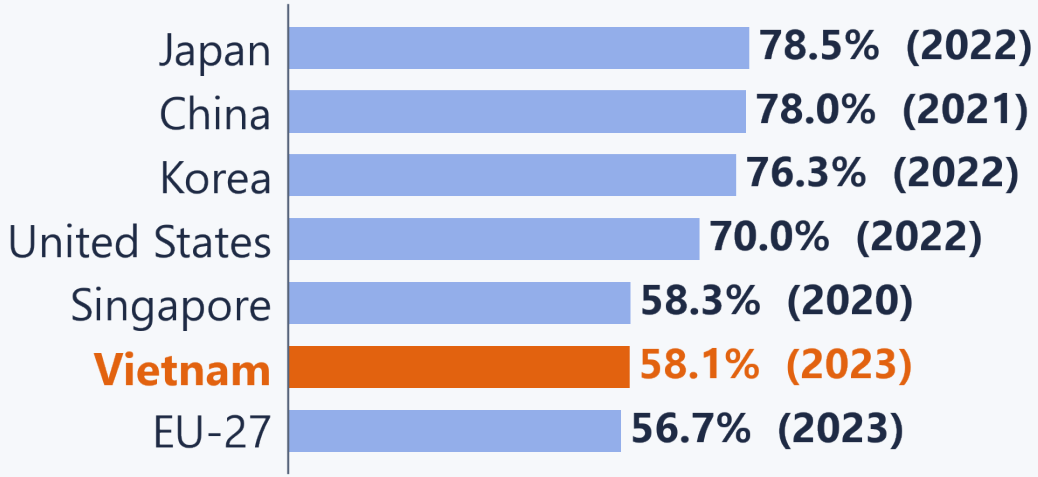
in bars: share funded by business



0.415%

of GDP in 2023. The 2030 target of 2% is nearly five times higher.

Share of R&D funded by businesses



In leading economies, business funding comes with clear rules.

- Horizon Europe · open science and data management plans
- UK · Lambert model agreements
- US · NIH conflict-of-interest rules for funded research

Inside this private sector, non-public universities are growing fast. →

Source: Ministry of Science and Technology, Vietnam Science, Technology and Innovation 2024, Table 2.18; World Bank (2025); OECD MSTI via KISTEP (2024); Eurostat. Latest year available for each economy.

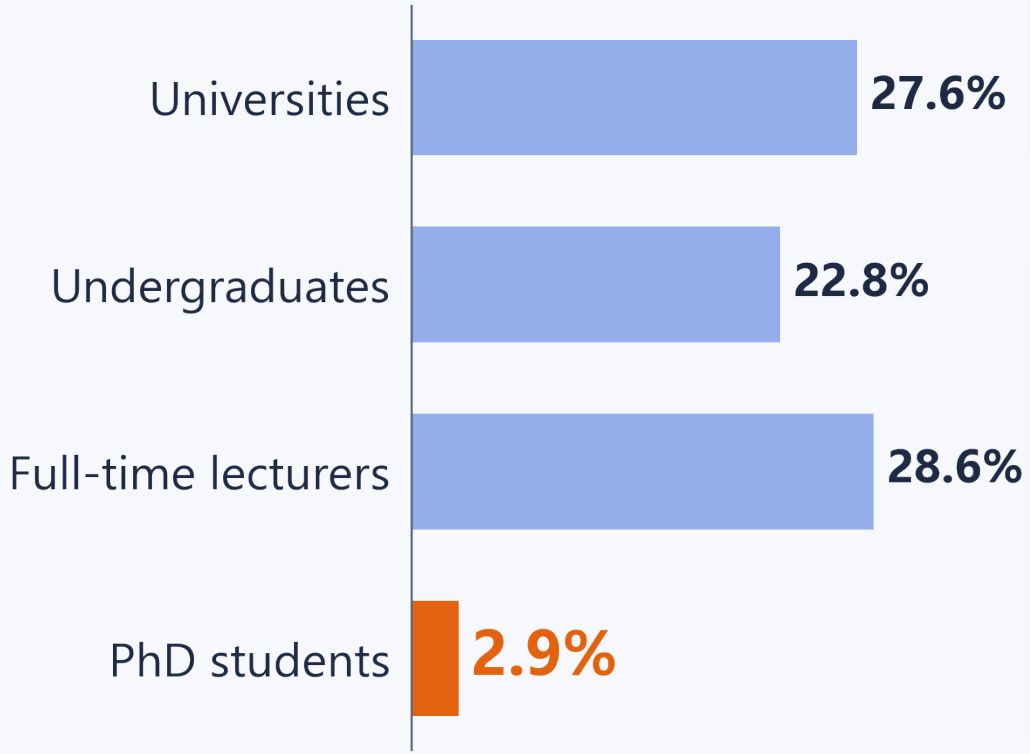
A company funds your research. The results disappoint. Who decides?

1. Who decides whether the results are published?
2. Who owns the data?
3. May a PhD student use the data for a dissertation?

Without clear answers from the outset, R&D in Vietnam will be hard to grow.

The non-public sector has scale but lacks research depth

Non-public share of higher education, 2023–2024



51.9% → 59.7%

non-public share of all S&T organisations, 2018 → 2023

Leading examples

VinUni · 16 top-2% scientists, the most in Vietnam

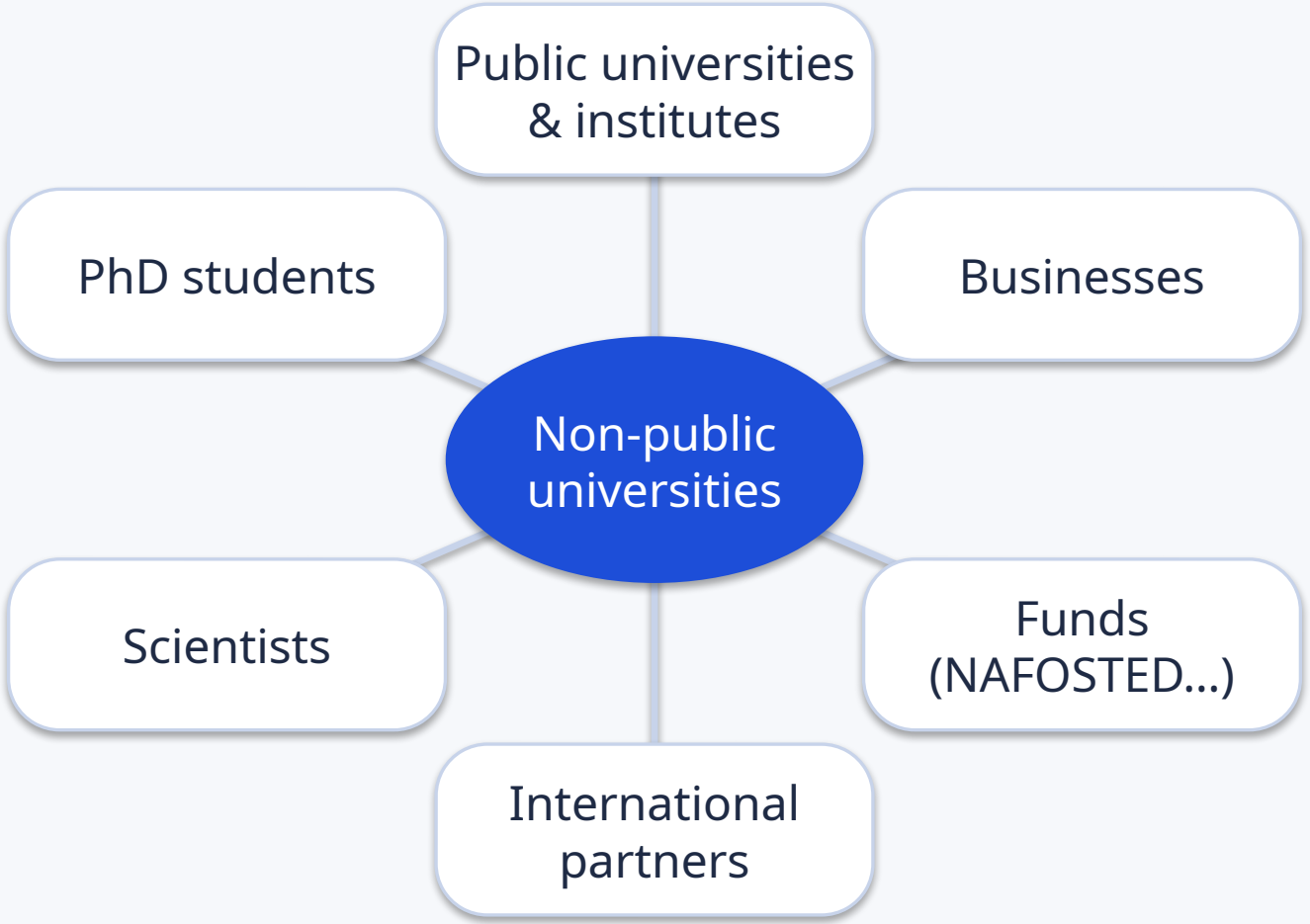
Phenikaa · No. 1 in Vietnam in the Nature Index

Duy Tan, Van Lang · rapid growth

With scale but little depth, the non-public sector must collaborate. →

Source: Ministry of Science and Technology (2018, 2023); MOET, 2023–2024; Nature Index 2024; Giao duc Viet Nam (2026)

Collaboration is inevitable, and so are new issues



Why they must collaborate

- Competition for staff

→ Issues 3, 5

- Lack of modern laboratories

→ Issues 1, 4, 7

- Few PhD students (2.9%)

→ Issue 6

National conference, 11/11/2025. Leaders of 40 private universities and more than 250 delegates agreed. Quality of teaching, research and innovation comes first.

When money, people and laboratories belong to different parties, seven issues arise. →

Ownership and the right to publish research results

The problem

- A private university funds the work. A public university provides the laboratory. Scientists do the research.
- Who owns the data, inventions and research outputs?
- Who may use them commercially?
- Who may publish, and when?

Example

Operating data → Forecasting model → Whose?

- A company provides operating data. A research team builds a forecasting model.
- When the project ends, the company claims both. The team wants to publish.
- The same risk exists inside one group, for example the VinUni–VinFast battery laboratory (2025).

Without clear rules

- The funder may claim all results, while the researchers see it differently.
- This leads to disputes, locked results and broken partnerships.

Owning the results is one question. Sharing the data is another. →

Data sharing and protection of investment

The problem

- Scientists need to share data so that others can verify results.
- Funders need to protect trade secrets and competitive advantage.
- Early disclosure can destroy the novelty of an invention.
- Personal data must follow Law 91/2025. Storing data also costs money.

Evidence

6.8%

of authors who promised "data available on request" actually shared (1,792 papers)



Without clear rules

- If data are too closed, results cannot be verified.
- If data are too open, companies will not invest.

Shared data lead to shared papers. Then who gets the credit? →

Source: Gabelica et al. (2022)

Authorship, affiliations and publication credit

The problem

- Disputes over first author, corresponding author and author order
- Paying to be listed without real contribution
- Listing an affiliation only to meet publication targets

Evidence

>10,000

papers retracted worldwide in 2023, a record year, mostly linked to paper mills

Proposal · three criteria for multiple affiliations

Proposed by the author

(a) A written appointment, contract or collaboration agreement

(b) Part of the work was really done there, or used its resources

(c) The employing institution is informed and gives consent

Without clear rules • Genuine collaboration cannot be told apart from affiliation trading.

Credit is one shared resource. Laboratories and funds are another. →

Source: Nature (2023), doi:10.1038/d41586-023-03974-8

Use of laboratories, assets and research funds

The problem · private funds, public laboratories

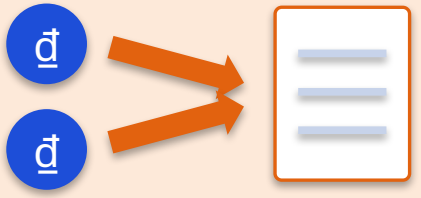
- Who has the authority to use the laboratory?
- Who pays for operating costs, equipment depreciation and consumables?
- Who is liable when an incident occurs?

Example

- A privately funded project uses equipment in a public university laboratory.
- Nobody has agreed who pays for running costs and wear.

Two risks to prevent

- The same expense is paid from several sources.
- Resources for one task are used for another without permission.



Without clear rules

- Public assets are used without accountability, and costs may be paid twice.

When money and roles overlap, conflicts of interest follow. →

Conflicts of interest and scientific independence

The problem

- One scientist may be a public lecturer, a private collaborator and a company consultant.
- These roles compete for time, confidentiality and financial interests.
- Funders must not change conclusions or withhold unfavourable results.

Evidence

~1/3

higher chance of conclusions favouring the sponsor's product (Cochrane, 2017)

- One drug study was blocked by its sponsor for almost 7 years.

A specific risk in Vietnam

- The funder may also own the university and use the results.
- *This is a risk to govern, not evidence of misconduct.*

Without clear rules • Society and international partners lose trust in the results.

PhD students are most exposed when several parties share one project. →

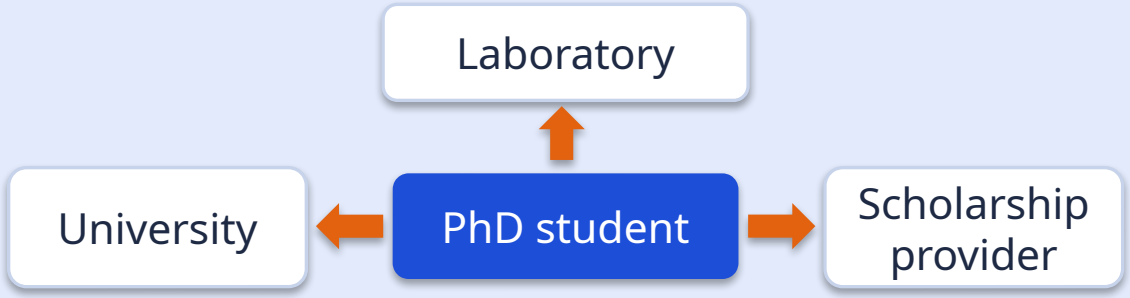
Source: Lundh et al. (2017); Rennie (1997)

Rights and responsibilities towards PhD students

Reality

3

places for one PhD student. Study at one, experiment at another, scholarship from a third.



The problem

- Who is responsible for supervision?
- May the student use the data for the dissertation?
- Who is listed as an author?
- May the student continue the research after the collaboration ends?

Without clear rules

- Confidentiality clauses can delay the dissertation defence.
- The student can lose credit for their own contribution.

With many partners, who checks quality and handles misconduct? →

Quality control and handling of integrity breaches

The problem · pressure for papers, rankings and targets can lead to

- Splitting one study into many papers
- Duplicate publication
- Data of unclear origin
- Manipulation of authorship

Open questions in inter-institutional research

- Who holds the original data?
- Who checks the results?
- Which institution leads when allegations, corrections or retractions arise?

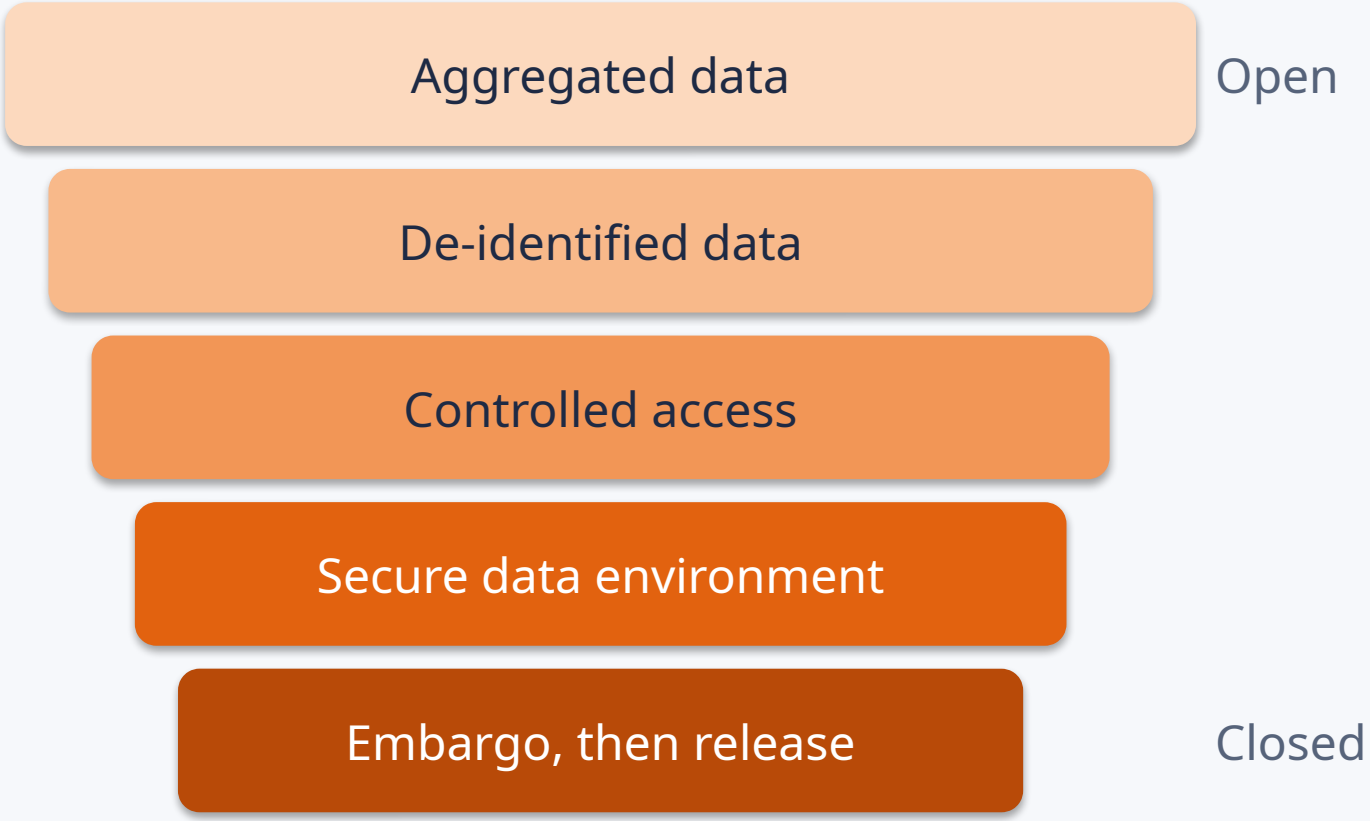
Without clear rules

- Nobody leads the response when allegations or retractions arise.

Collaboration is sustainable only with a clear agreement from the outset. It must cover ownership, access, publication, benefit sharing and accountability.

Next, three solutions answer these seven issues, starting with data. →

Share data by tier, as open as possible, as closed as necessary



Three types of data, three access rules

- State-funded data
- Company-funded data
- Public–private project data

Legal basis · Law 93/2025 and Circular 22/2025

Confidentiality must never become an excuse to avoid verification.

Open data help, but integrity also needs independence from funders. →

Source: Horizon Europe; OECD (2021); Law 93/2025/QH15; Circular 22/2025/TT-BKHCN

Safeguarding integrity and independence when private funds are used

1 Transparency

Declare, assess, manage and disclose funding and interests. Disclosure does not mean banning collaboration.

2 Independence

The team decides methods and interpretation. Unfavourable results are still reported.

3 Oversight

Keep original data, logs and code. Protect good-faith whistleblowers.

Leading examples

POSTECH (Korea)

Founded by POSCO. Academic management is entrusted to the president.

VinUni (Vietnam)

Research Integrity Policy 2025, with conflict-of-interest declaration and whistleblower protection.

Legal basis

Law 93/2025, Art. 8 treats hidden conflicts of interest as a breach of integrity.

Integrity is a precondition of collaboration, not only a matter of personal ethics.

Both safeguards work best when written into the agreement at the start. →

Source: Altbach & Salmi (2011); VinUni (2025); Law 93/2025/QH15, Art. 8; Decision 2557/QĐ-BKHCN (2026)

Nine clauses agreed at the start, and four models of collaboration

Nine minimum clauses

1 Ownership	2 Access and use	1 5 Publication, no veto
3 Authorship and affiliations	4 Laboratories and funds	5 Conflicts of interest
6 PhD students	7 Storage and breaches	Termination and disputes (all)

The UK has 7 Lambert templates. Vietnam has none yet.

Four models

1. Contract research · Fraunhofer receives about 2/3 of its budget from contracts.
2. Joint research · Shared funds, staff, laboratories and a joint data management plan.
3. Joint PhD training · Co-supervision narrows the 2.9% gap.
4. Controlled data platforms · Analyse data without taking a copy.

Law 93/2025, Art. 37 opens public infrastructure to the non-public sector. One barrier remains. Higher Education Law, Art. 29(2) limits joint full-time lecturers to public institutions.

One national fund can start all of this now, without changing the law. →

Source: UK IPO Lambert toolkit; Fraunhofer (2026); Laws 93/2025 and 125/2025/QH15; Decree 159/2026/NĐ-CP

NAFOSTED can lead today, with no change in the law

1. Make a data management plan mandatory, and allow data costs in budgets
2. Require declaration of funding sources and conflicts of interest
3. Require a written agreement before signing co-funded projects
4. Develop and pilot model agreements for research collaboration
5. Treat public and non-public applicants equally

It works because it is tied to funding, so change is fast. It also sets a standard for other funds, in line with international funders.

NAFOSTED can start, but each responsible body also has a role. →

Recommendations by responsible body

National Assembly & Government	Ministry of Science and Technology	Ministry of Education and Training	NAFOSTED	Universities & investors
▸ Amend Art. 29(2), Higher Education Law, and Decree 159 ▸ Procedures and price schedules for Art. 37, Law 93 ▸ Laboratories for strong non-public research groups	▸ Unified guidance on integrity and data ▸ Issue national model agreements ▸ Tiered data sharing (OECD)	▸ Conflicts of interest, data plans and retractions in university standards ▸ Separate academic decisions from ownership ▸ Evaluate quality, not only quantity	▸ Pilot model agreements ▸ Mandatory data plans and conflict-of-interest declarations ▸ Equal treatment of all applicants	▸ Investors do not approve publications ▸ External members on scientific councils ▸ Reward quality, and repay the reward if a paper is retracted

Together, these steps answer the three questions we began with. →

Source: paper Section 4; ALLEA European Code of Conduct for Research Integrity (2023)

Three answers, one principle

1. **Published?** Yes, including unfavourable results. A pre-publication review period, never a veto. → slides 16–17

2. **Whose data?** Written in the agreement, by contribution. → slides 15, 17

3. **PhD student?** Data use and credit are agreed at the start. → slide 17

As open as possible

Protected when necessary

Transparent in all cases

Fair in access to public investment

Research integrity is the foundation of trust in science.

Thank you · ducnd@vnu.edu.vn

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