Data 4 Policy
Why Quantification Matters in Modern Society

IPSDS
INTERNATIONAL PROGRAM IN SURVEY & DATA SCIENCE

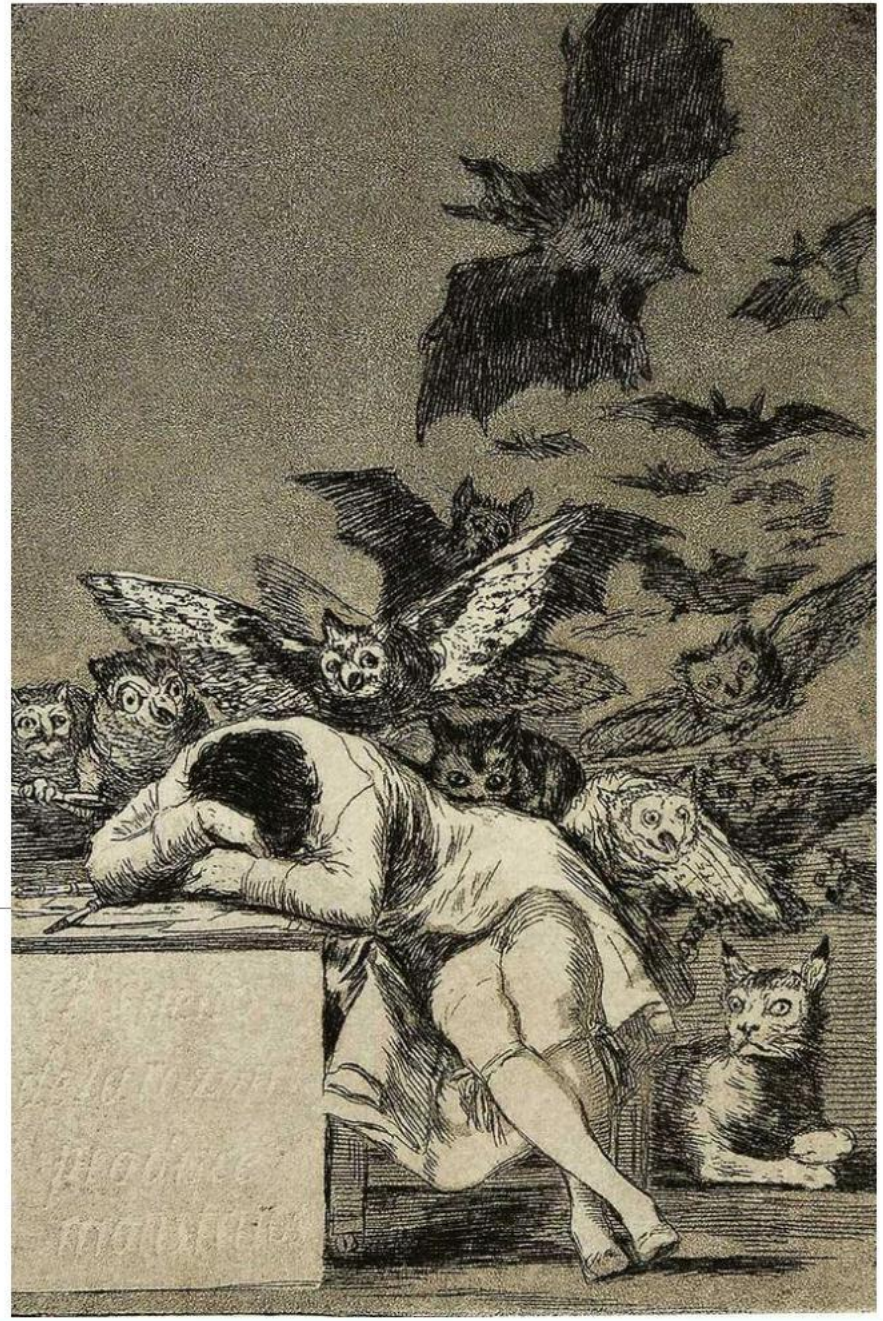
BERD @NFDI

LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

WALTER J. RADERMACHER

Threats

US FEDERAL STATISTICS AND MORE



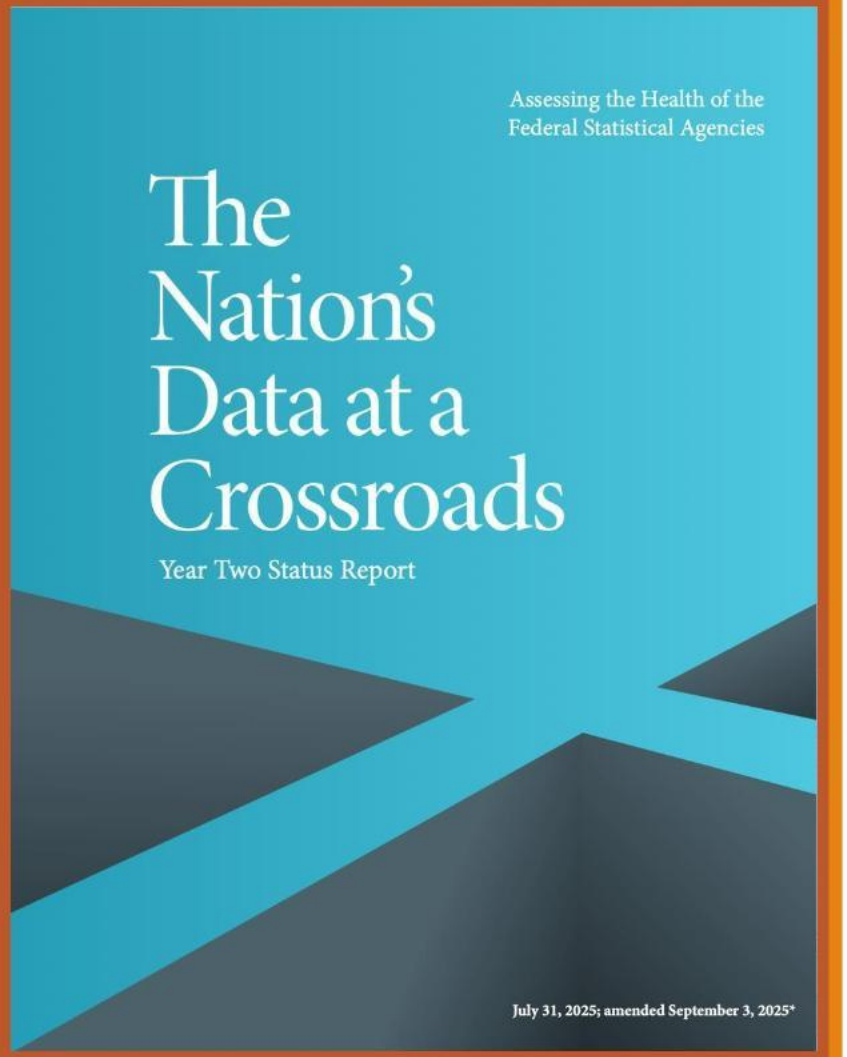
https://museogoya.fundacionibercaja.es/en/obras/the-sleep-of-reason-produces-monsters

News & BlogPosts -Early January 2026

https://doi.org/10.1080/13501763.2025.2580519

https://www.bloomberg.com/news/articles/2026-01-09/why-the-trump-administration-is-choosing-not-to-collect-some-us-data

https://www.linkedin.com/posts/mirkolange_diedrift-machtvorrecht-kulturkampf-activity-7415302384580509697-RRla?utm_source=share&utm_medium=member_desktop&rcm=ACoAABa-g44B69Plc4H-20rRu3hQuwG8zVA7GwI



American Statistical Association's Monitoring Framework:
Six Critical Risk Areas for Federal Statistics

1. Cuts to Statistical Programs Programs
2. Delays or Reductions in Data Products
3. Budget and Staffing Reductions
4. Undermining Leadership and Staff Delays in appointments or unfilled leadership roles
5. Misuse of Data for Nonstatistical Purposes Other Emerging Threats

https://www.amstat.org/docs/default-source/amstat-documents/nations-data-at-crossroads.pdf

Price Index

Reuters

Tension over inflationary data casts shadow over Argentine financial market

By Jorge Otaola

February 3, 2026 6:42 PM GMT+1 · Updated February 3, 2026

A drone view shows the facade of the Buenos Aires Stock Exchange, in Buenos Aires, Argentina December 18, 2024. REUTERS/Francisco Loureiro Purchase Licensing Rights

https://www.reuters.com/world/americas/tension-over-inflationary-data-casts-shadow-over-argentine-financial-market-2026-02-03/

António Guterres • Following
Secretary-General of the United Nations
2d •

GDP tells us the cost of everything, and the value of nothing.

The Gross Domestic Product (GDP) is failing to sufficiently address the environmental and social concerns of our world.

Our economic models and measurements overlook many aspects that sustain life and contribute to human well-being, while placing disproportionate value on activities that deplete the planet:

When we destroy a forest, we are creating GDP.
When we overfish, we are creating GDP.

We must place true value on the environment and go beyond GDP as a measure of human progress and well-being – now and in the future.

https://www.linkedin.com/posts/antonio-guterres_gdp-tells-us-the-cost-of-everything-and-activity-7426979142170001408-tqve?utm_source=share&utm_medium=member_desktop&rcm=ACoAABa-g44B69Plc4H-20rRu3hQuwG8zVA7GwI

Andrea Saltelli

Give me a number!

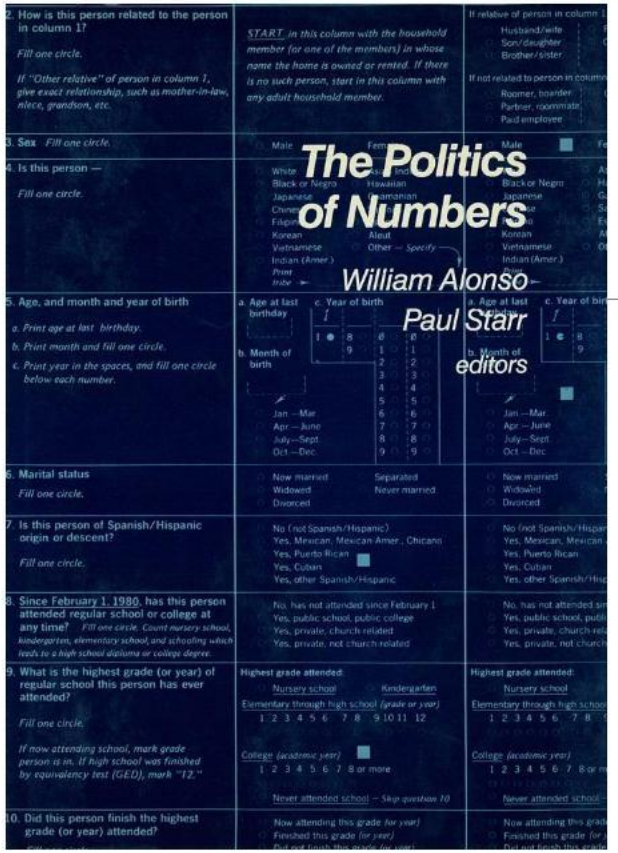
"The pandemic has also shown that the act of quantifying, either by a model or by an algorithm, increasingly nourishes the science–policy interface with the opportunity to outsource decision-making authority to number-based decision-making , when momentous political decisions are delegated to the purported neutrality of model generated numbers."

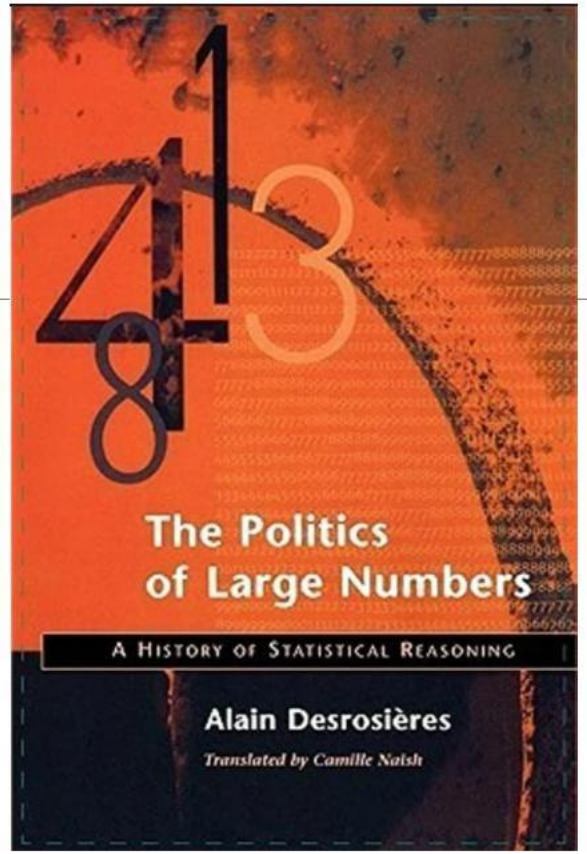
https://www.nature.com/articles/s41599-020-00557-0

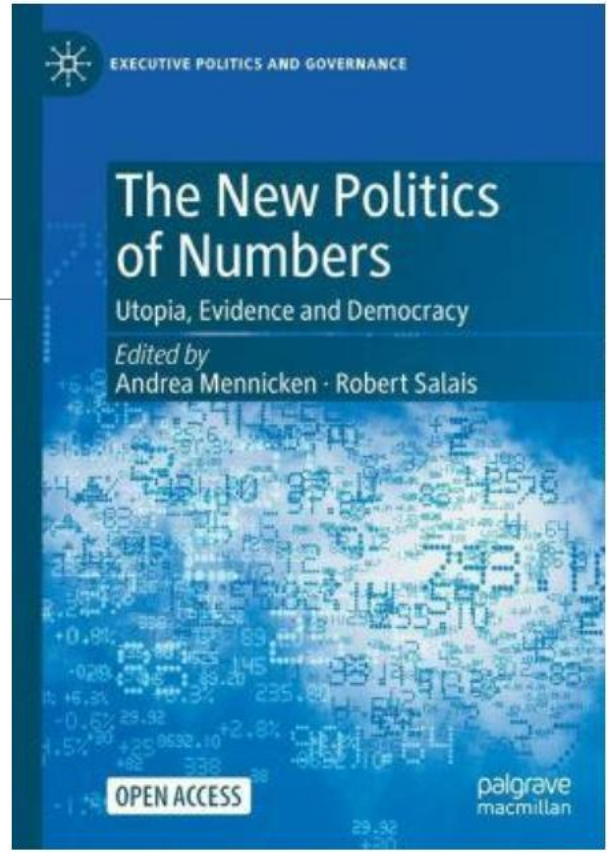
Sociology of Quantification

WHY QUANTIFICATION MATTERS IN MODERN SOCIETY

WALTER J. RADERMACHER







1987

1998

2022

Alonso, W., and P. Starr. 1987. *The Politics of Numbers* (Russell Sage Foundation).

Desrosières, Alain. 1998. *The Politics of Large Numbers - A History of Statistical Reasoning* (Harvard University Press: Cambridge Massachusetts).

Mennicken, Andrea, and Robert Salais. 2022. *The New Politics of Numbers: Utopia, Evidence and Democracy* (Palgrave Macmillan: Cham).

Alain Desrosières

Quantification is

- not merely a technical process,
- but also a social phenomenon that influences how we perceive and organise the world.
- It involves producing and communicating numbers, converting qualities into quantities, and creating new social realities.

Historical context

- The emergence of modern statistics in the 17th–19th centuries (e.g. censuses, economic data)
- Statistics was/is connected to state formation, administration and scientific objectivity.

Key terms:

- Conventions: Quantification is based on social agreements (e.g. the definition of poverty or unemployment).
- Power: Who defines what is measured? (Example: GDP as an indicator of prosperity).
- Objectivity as an illusion: Numbers appear neutral, but they are the result of social processes.

Espeland and Stevens A Sociology of Quantification

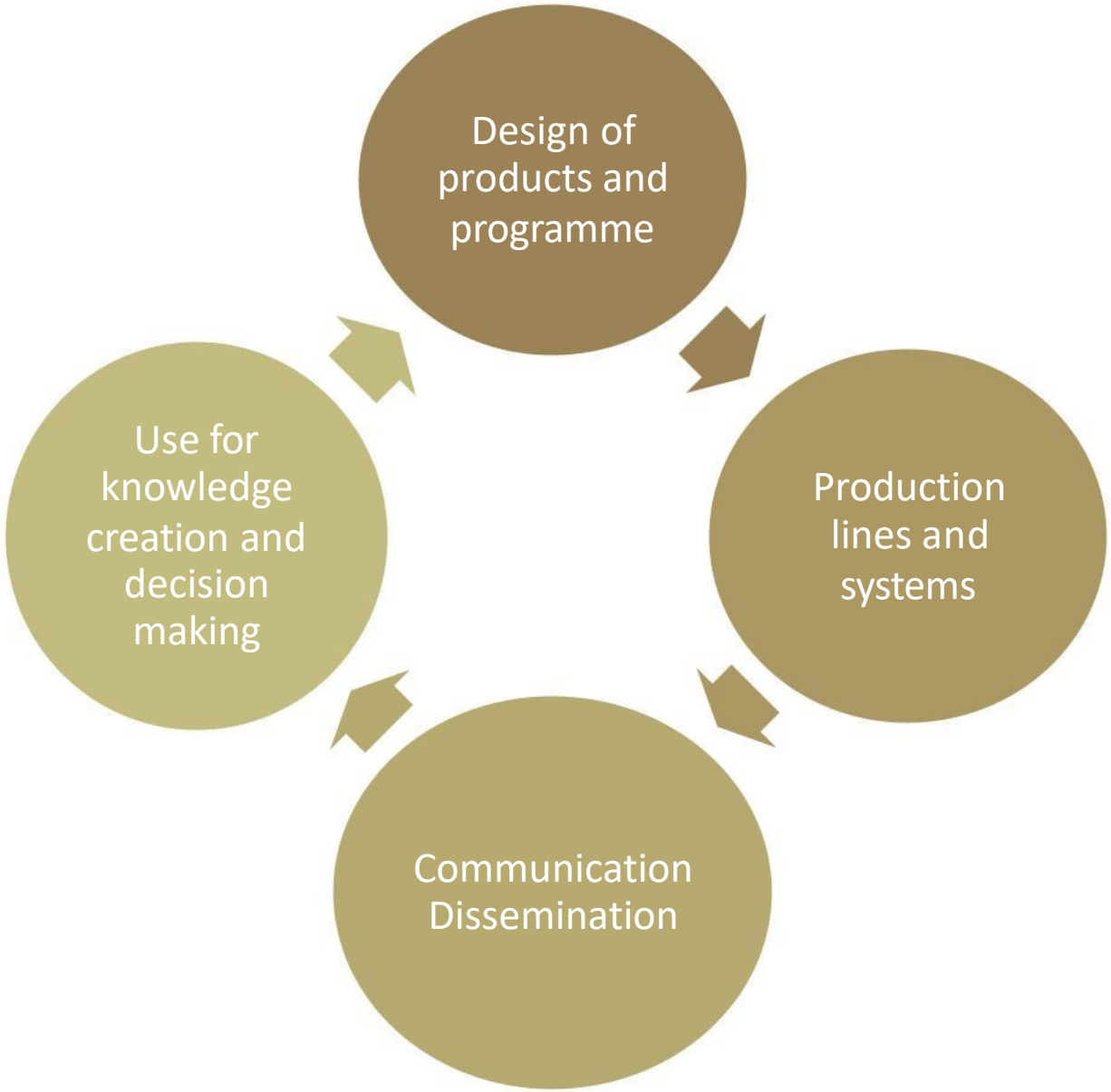
http://www.jstor.org/stable/23998802

As with language, purposes and meanings of quantification are established through use.

Five sociological dimensions

- **Work**: Quantification requires significant labour, infrastructure and coordination (e.g. bureaucracies and standardised methods).
- **Reactivity**: Numbers change what they measure. For example, test scores shape education systems and rankings alter institutional behaviour.
- **Discipline**: Quantification enables surveillance and control, often reinforcing norms and hierarchies (e.g. performance metrics in workplaces).
- **Authority**: Numbers can be persuasive due to their perceived accuracy, usefulness or objectivity, but their authority ultimately depends on social trust and institutional power.
- **Aesthetics**: The clarity and elegance of numerical representations (e.g. graphs and charts) influence their credibility and impact.

Factory Statistics: Main Processes



Statistics: Main Processes

Traps, weaknesses

Audit Society, technocracy
Scientific misconduct, missing interest in ethics
Populism, conspiration theories
Authoritarian state

Inadequate Design, Coding, Planning
Budget, capacities
Neutrality jeopardised by mission/mandate
Pressure on professionals/managers

Miscommunication
Insufficient Literacy
Low Data Culture

Errors
Incorrect implementation

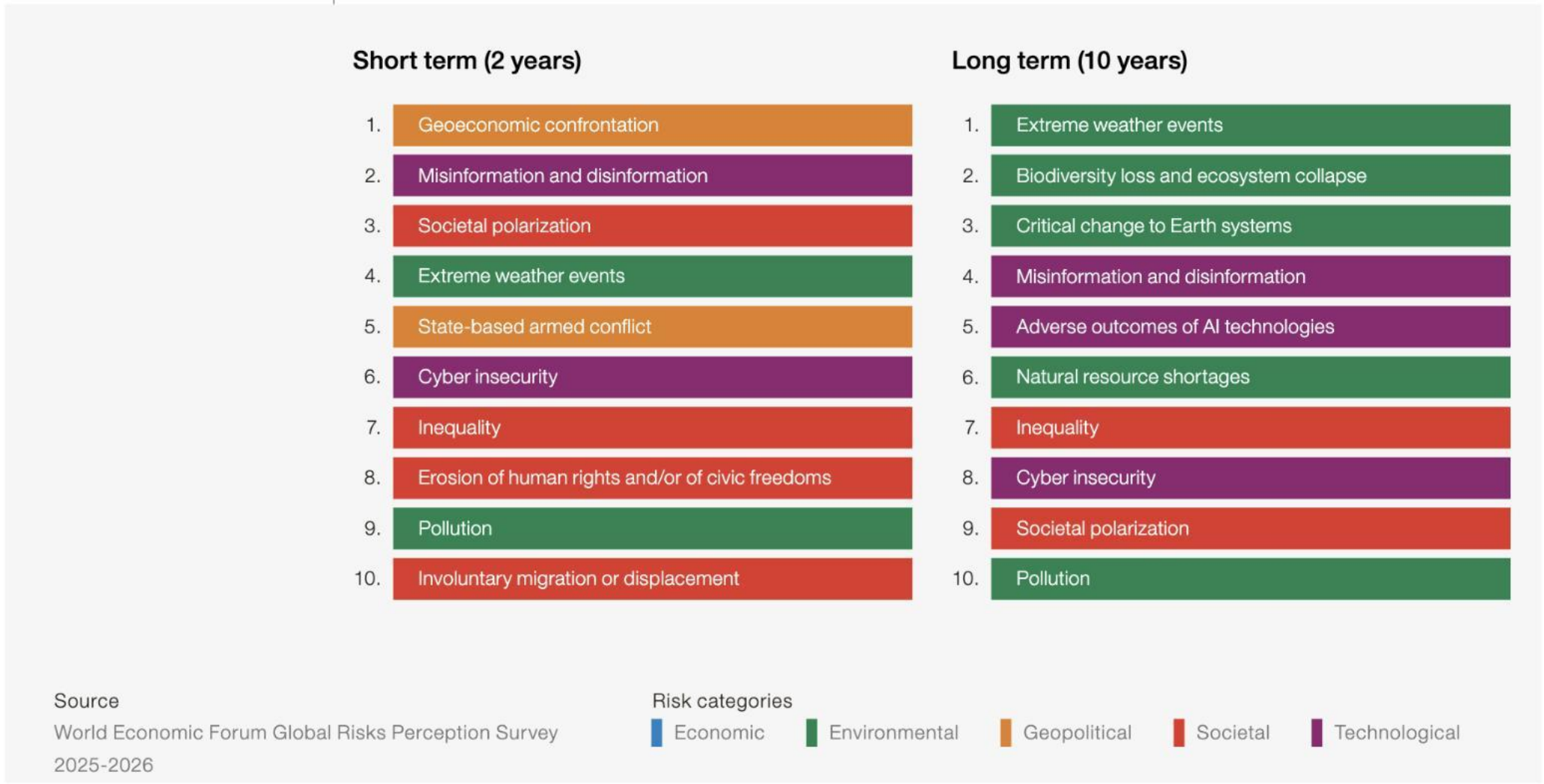
Which reality should be quantified?

THE “WHAT” TODAY, TOMORROW AND THE DAY AFTER TOMORROW

FIGURE 3

Global risks ranked by severity, short term (2 years) and long term (10 years)

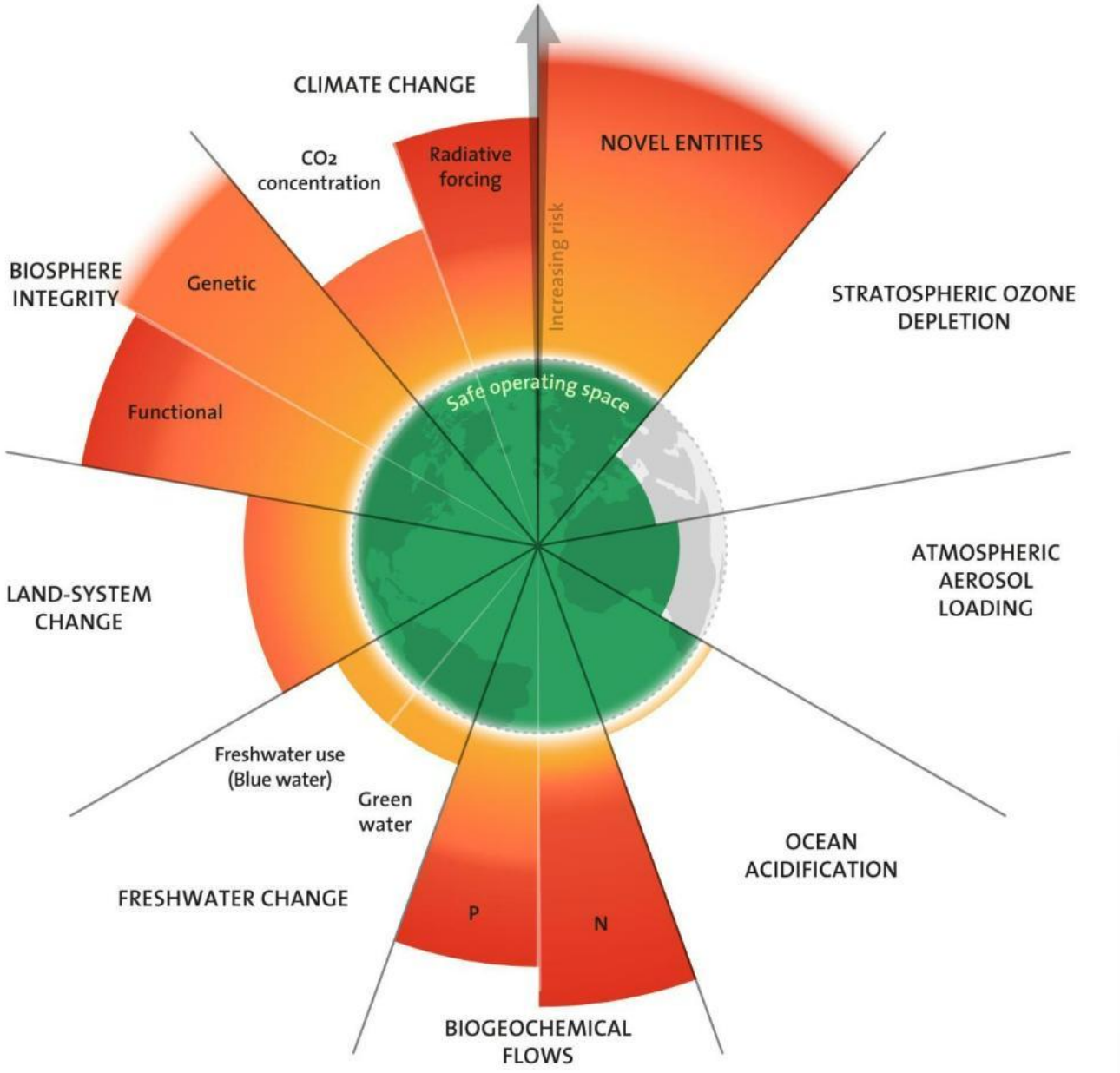
"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period."



https://www.weforum.org/publications/global-risks-report-2026/

Planetary Boundaries 2025

https://www.stockholmresilience.org/research/planetary-boundaries.html



United Nations

https://sdgs.un.org/goals

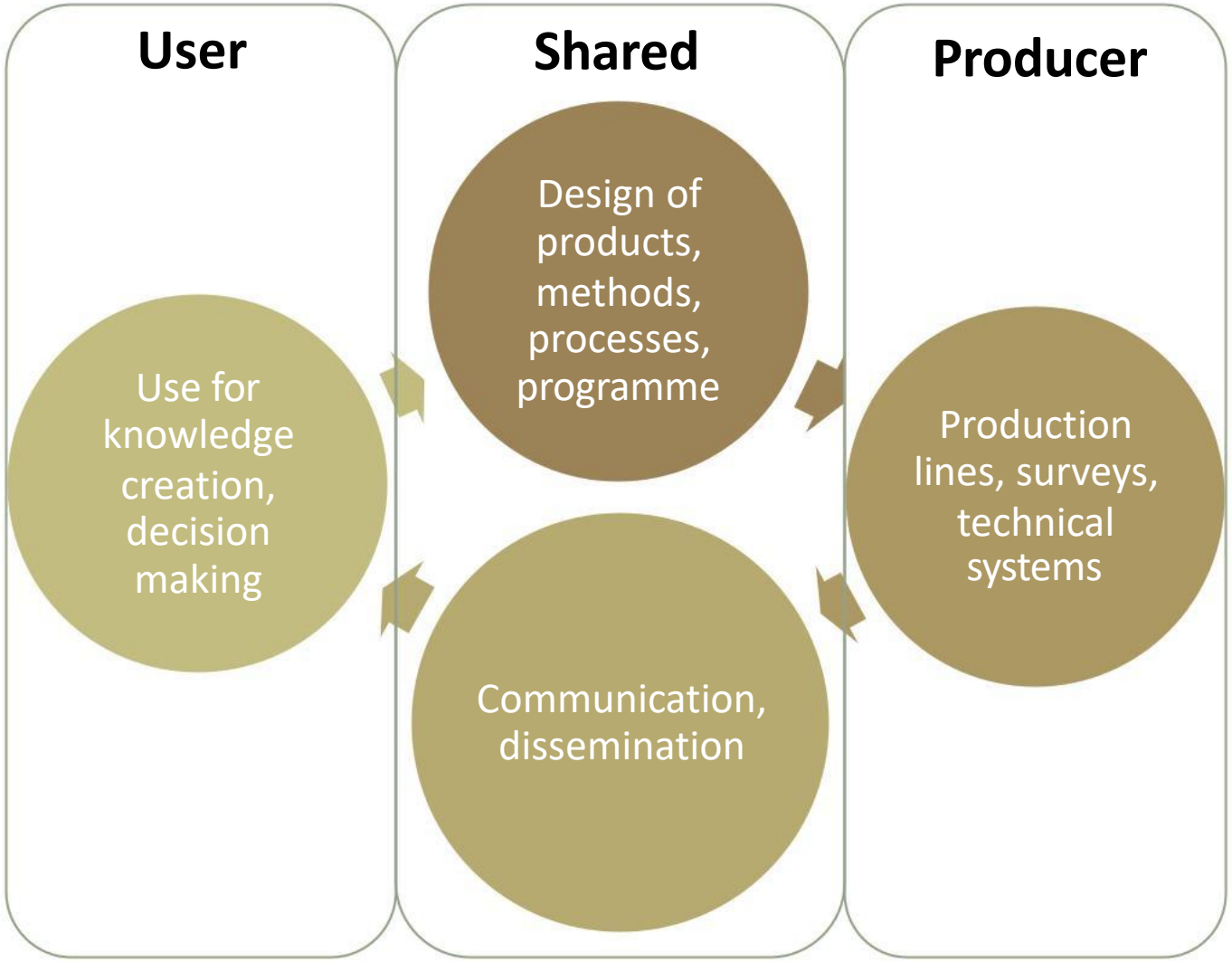
“HOW” do we quantify this reality?

CONVENTIONS IN PUBLIC STATISTICS

Standards

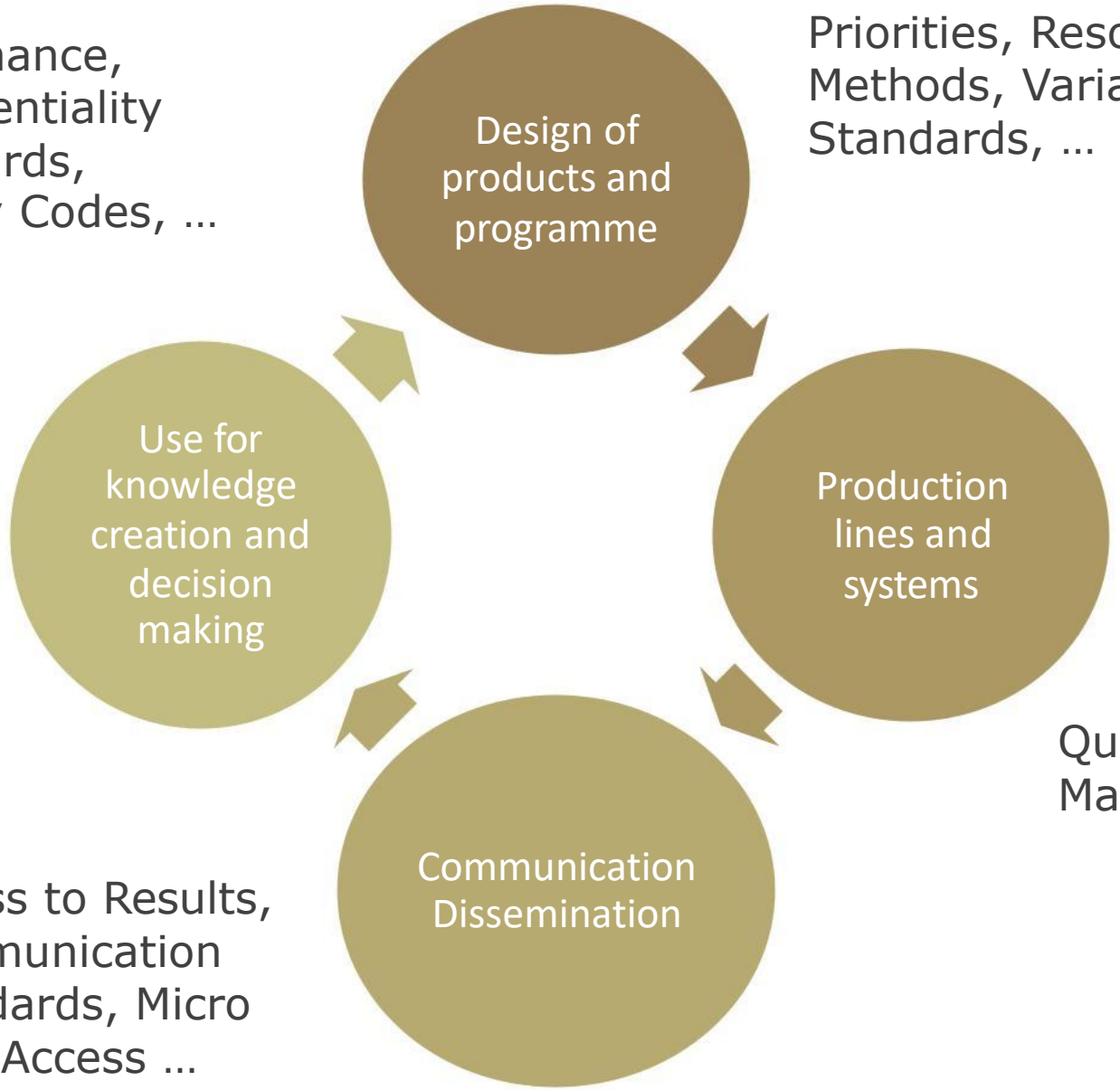
CONVENTIONS (STANDARDS) IN PUBLIC STATISTICS

Spheres of responsibility in statistical value chains



Factory Statistics: Main Processes

Conventions



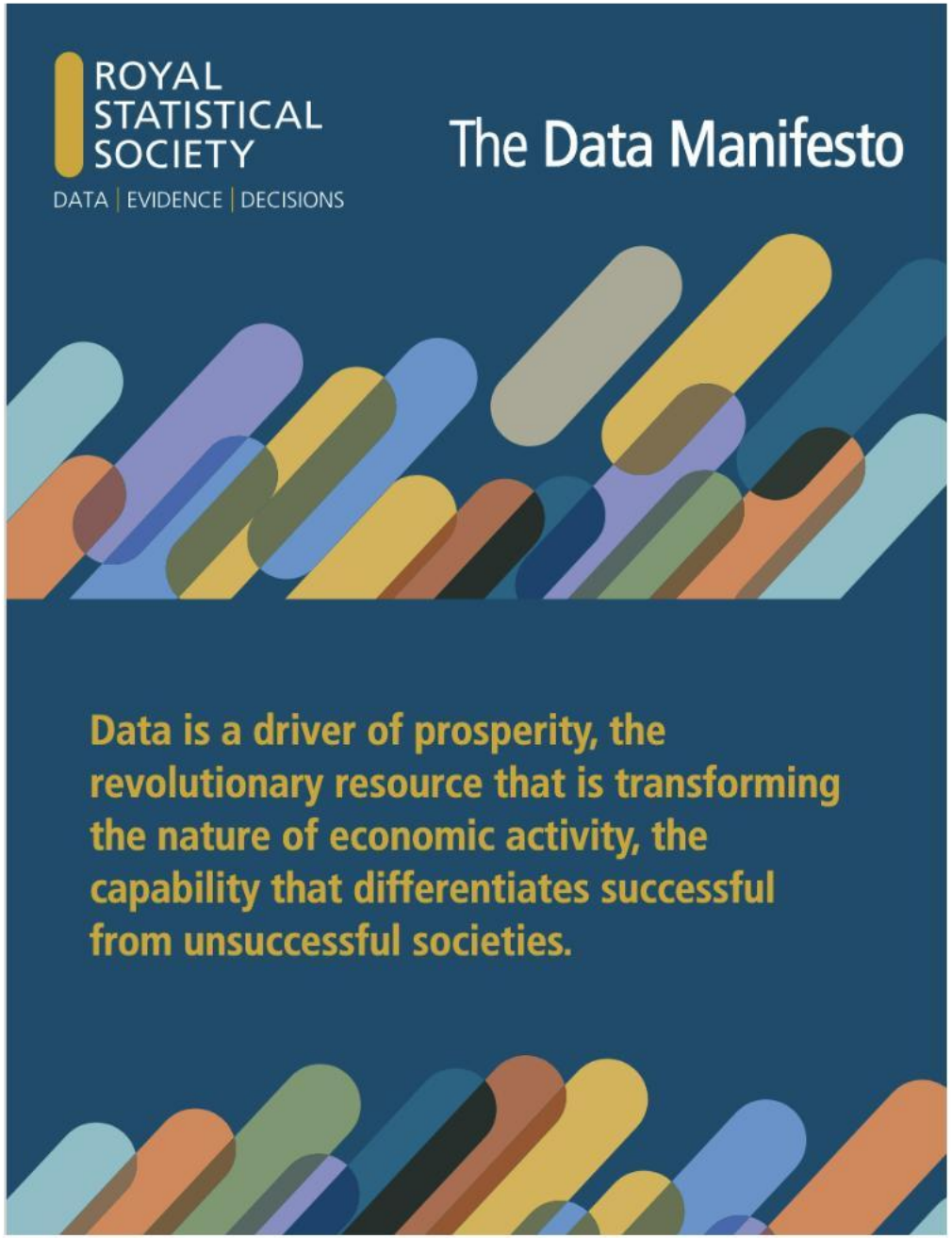
Data Manifesto

TODAY, TOMORROW AND THE DAY AFTER TOMORROW

WALTER J. RADERMACHER

UK 2019

https://rss.org.uk/policy-campaigns/our-campaigns/our-asks-of-government/



2026

The vision

We envision the future statistician as a trusted, tech-enabled leader of evidence — combining rigorous statistical foundations with strengths in AI, communication and data stewardship to deliver ethical, timely analysis for better public decisions. The report pairs enduring professional principles with new skills and responsibilities needed for the decade ahead.

The report also identifies five priority areas for action:

Equip Statisticians for Technological Change: Strengthen training, modern data infrastructure and AI leadership, working closely with digital and data professions.

Clarify Professional Identity and Skills: Update role definitions and competency frameworks to reflect new skills and specialisms within multi-disciplinary teams.

Support Career Progression and Learning: Create structured CPD across all career stages, fostering talent retention, cross-sector learning, and consistency in skills and expertise.

Integrate Statisticians: Embed statistical expertise across government, including in early in decision-making; promote collaboration with key departments; and share best practice for evidence-based policymaking.

Empower Statisticians as Arbiters of Truth: Build confidence in challenging misinformation and communicating transparently to maintain public trust.

https://rss.org.uk/news-publication/news-publications/2026/general-news/the-future-statistician-our-joint-vision-with-the/

Prof. Dr. Georges-Simon Ulrich · 1st

Chief Statistician Switzerland / Data Steward of Switzerland / Chair UN Statistical Commission / Prof (Research Methods & Strategy) / Official Statistics, Data Science & Governance

https://www.linkedin.com/posts/prof-dr-georges-simon-ulrich-092b7a22_5-key-takeaways-for-this-week-for-the-statistical-activity-7424040114734927872-lJhU?utm_source=share&utm_medium=member_desktop&rcm=ACoAABa-g44B69Plc4H-20rRu3hQuwG8zVA7GwI

5 key takeaways for this week for the statistical and data instititions around the globe:

1️⃣ AI is changing how knowledge is produced and consumed.
If official statistics and administrativ data are not machine-readable and semantically clear, AI systems will fill the gap with weaker, less trustworthy sources.

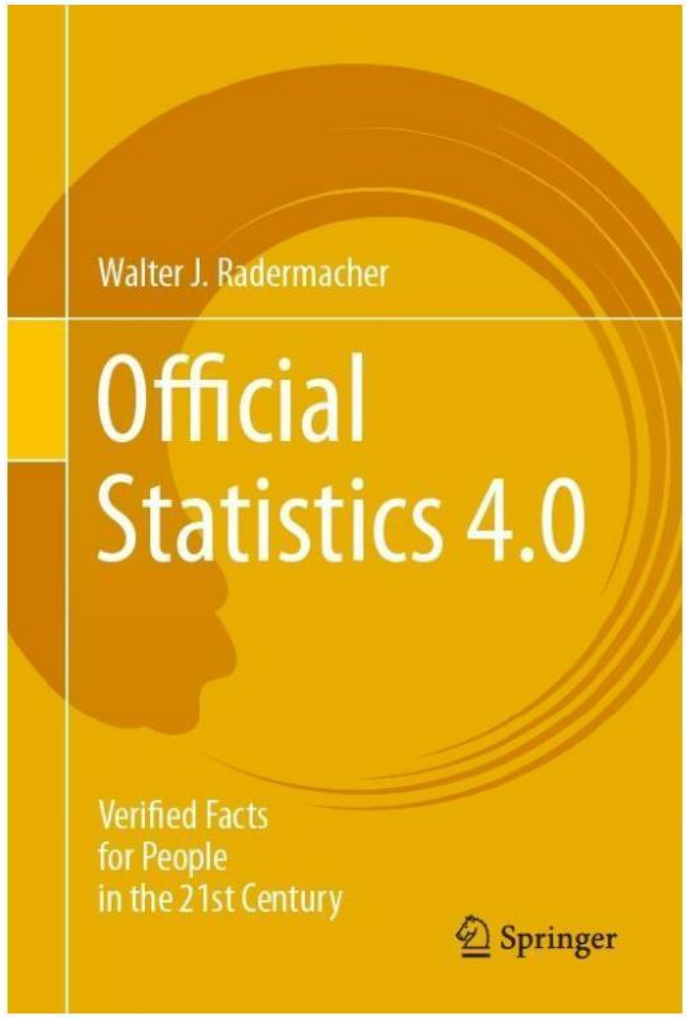
2️⃣ AI needs an epistemic backbone.
Reliable, well-governed data and metadata are the way to anchor AI outputs in shared facts rather than probabilistic narratives.

3️⃣ Statistical offices provide this backbone.
They combine methodological rigor, transparency and public accountability.

4️⃣ This cannot be built by single institutions alone.
AI-ready statistics and administrativ data require federated cooperation, common standards and shared infrastructure across countries and institutions.

5️⃣ Power must remain distributed and democratically governed.

MUCHAS GRACIAS
MUITO OBRIGADO
VIELEN DANK
THANK YOU
MERCI BIEN



https://www.springer.com/gp/book/9783030314910

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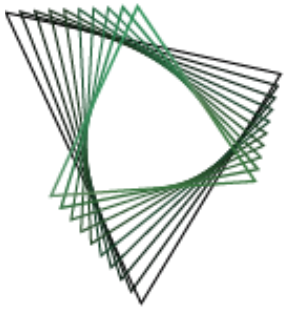

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