

Welche Fakten braucht die Gesellschaft?

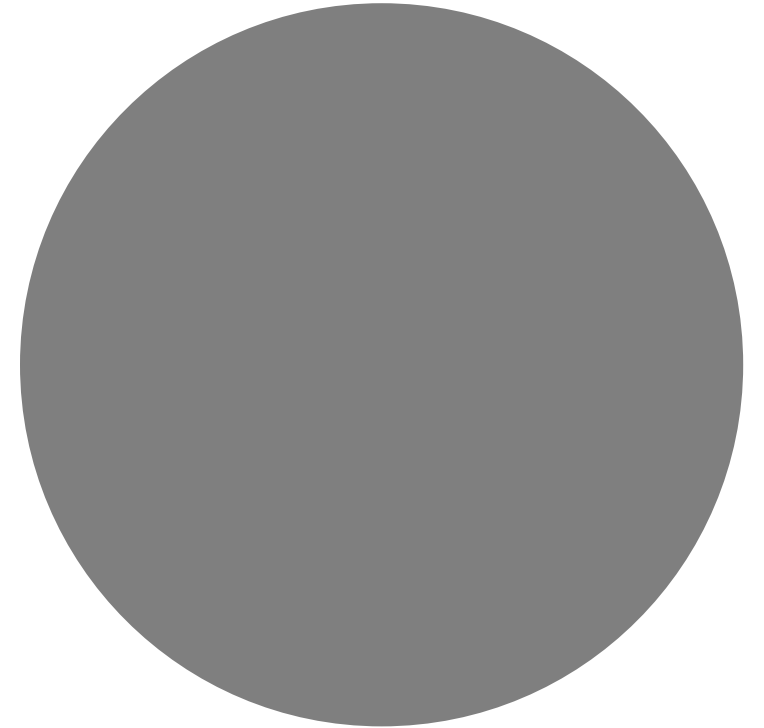
Basel

14. November 2019

Walter J. Radermacher

Research@ Innovation

The strategy towards 2030



Mariana Mazzucato



<https://marianamazzucato.com/>

Walter J. Radermacher



<https://op.europa.eu/en/publication-detail/-/publication/5b2811d1-16be-11e8-9253-01aa75ed71a1/language-en>

Global Agenda

World Economic Forum Annual Meeting 2019 Overview

Davos-Klosters, Switzerland 22-25 January

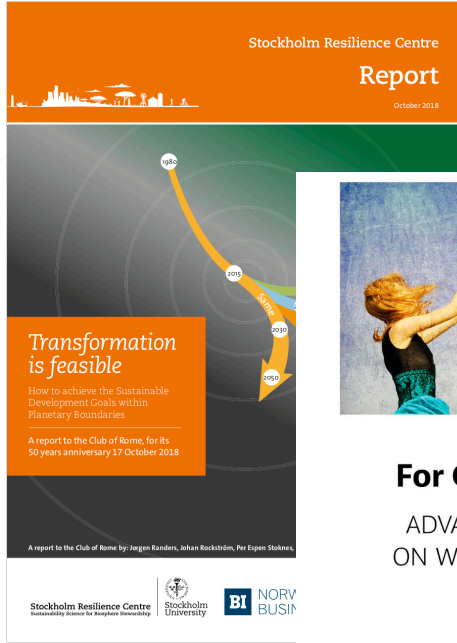


COMMITTED TO
IMPROVING THE STATE
OF THE WORLD



Globalization 4.0: Shaping a Global Architecture in the Age of the Fourth Industrial Revolution

http://www3.weforum.org/docs/WEF_AM19_Meeting_Overview.pdf



https://www.stockholmresilience.org/download/18.51d83659166367a9a16353/1539675518425/Report_Achieving%20the%20Sustainable%20Development%20Goals_WEB.pdf



https://read.oecd-ilibrary.org/economics/for-good-measure_9789264307278-en#



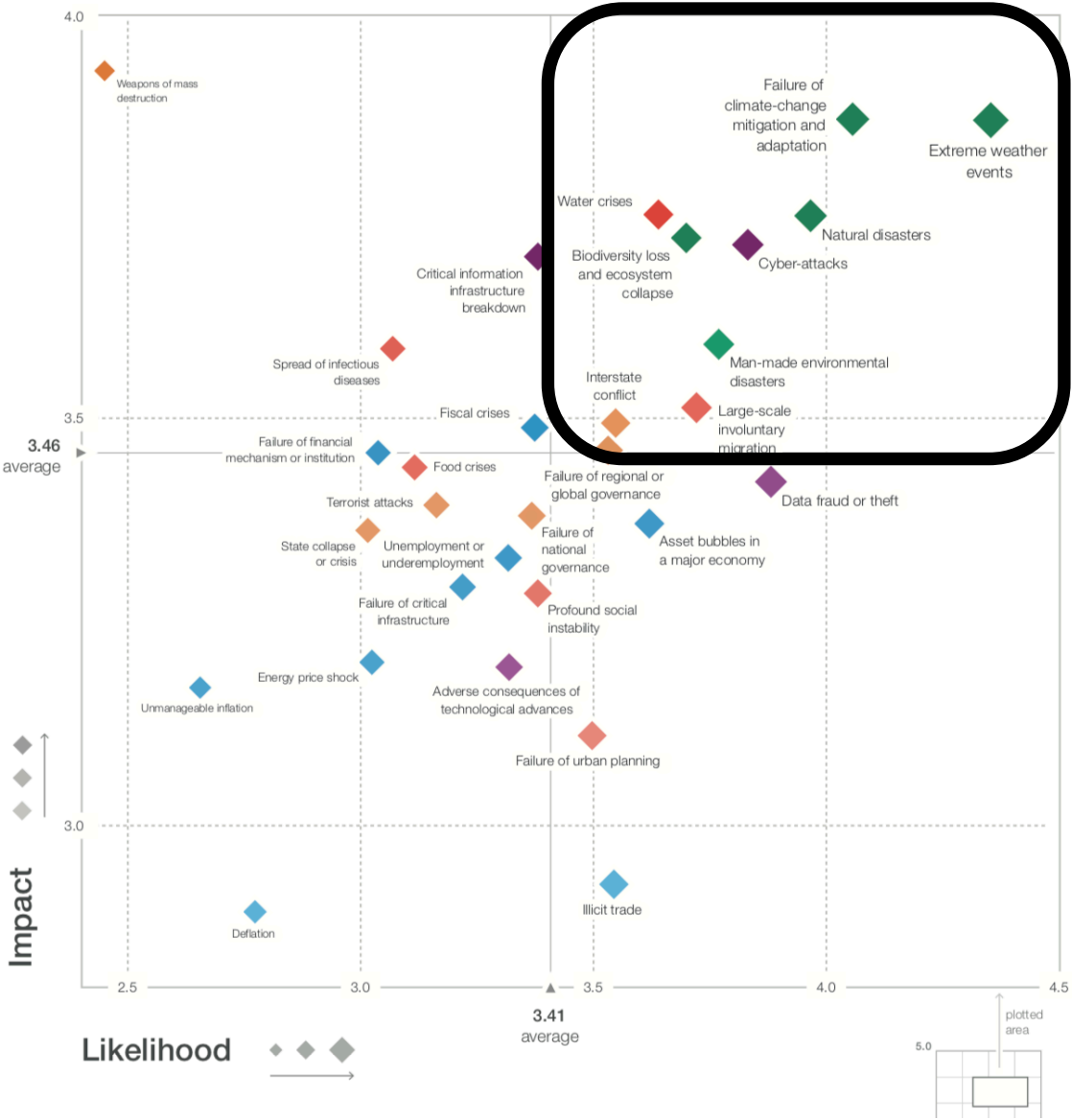
<https://www.socialistsanddemocrats.eu/publications/sustainable-equality-analysis-impact-110-policy-recommendations-issued-part-first-icse>

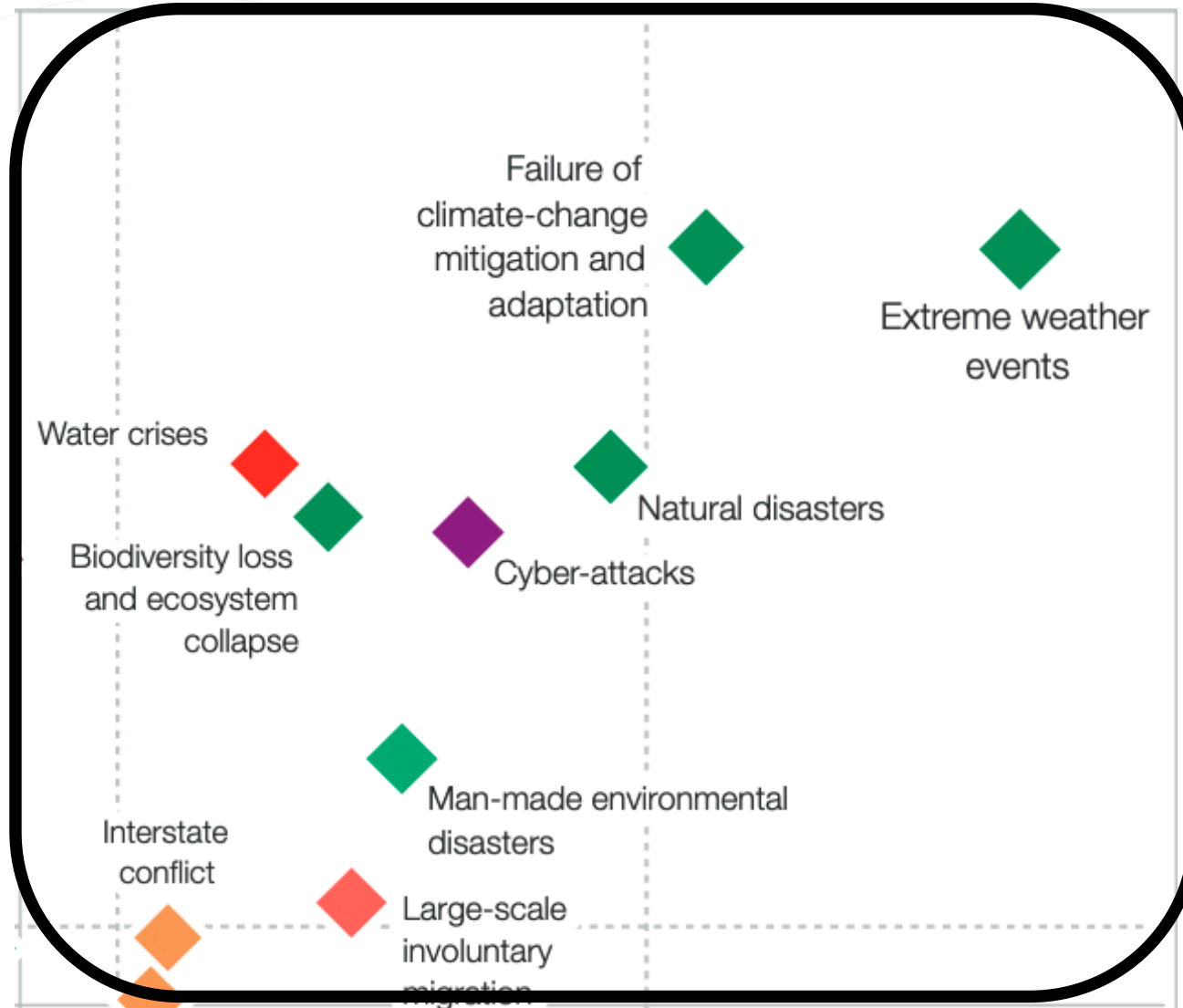
https://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_662410.pdf

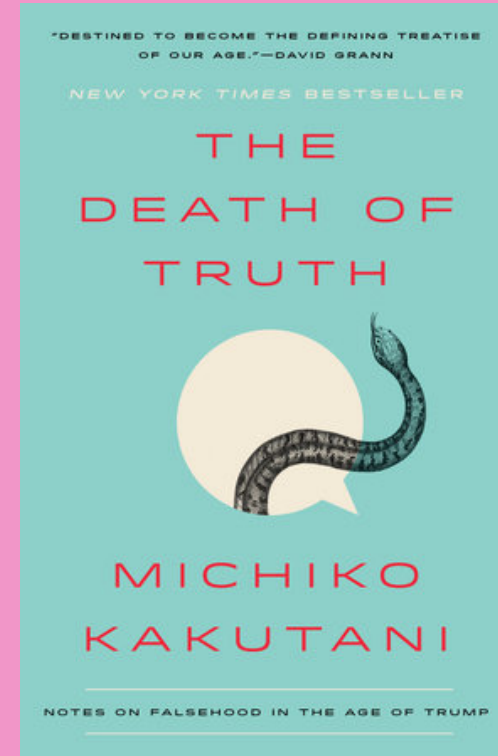
http://www3.weforum.org/docs/WEF_Global_Risks_Report_2019.pdf



Figure I: The Global Risks Landscape 2019



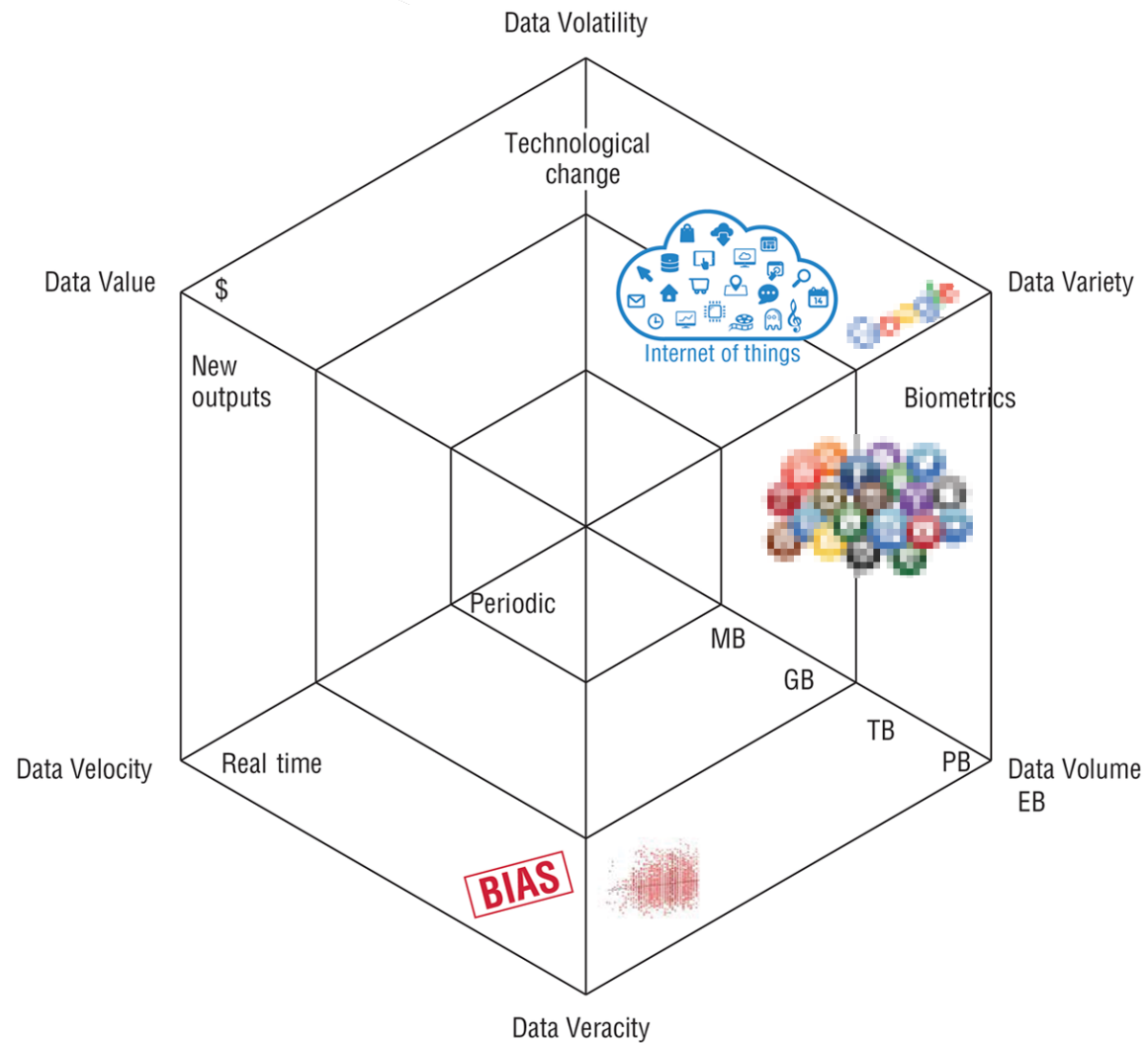




Data Goldrush & Death of Truth

The Era of Digitisation and Globalisation

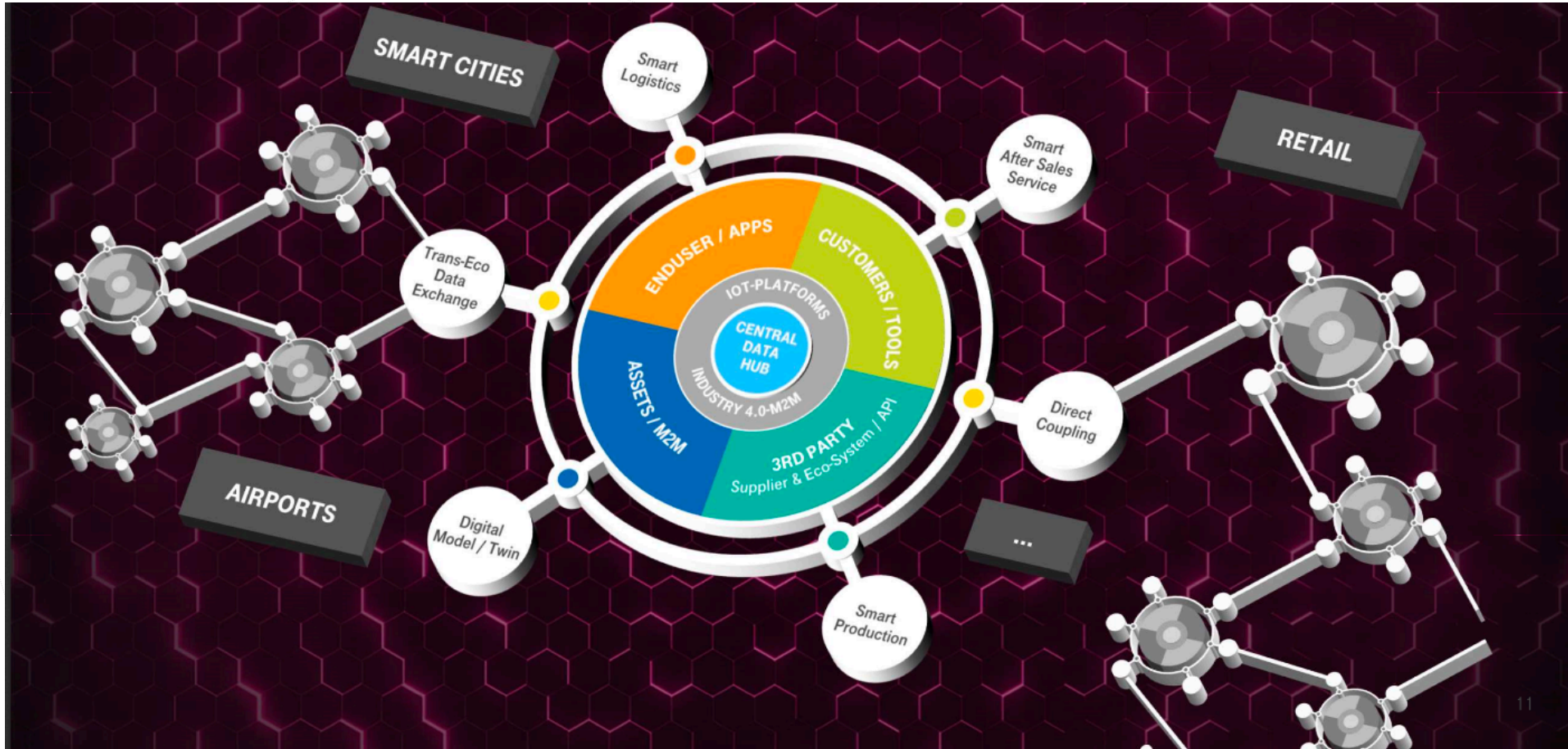
The 6V's of big data for official statistics



MacFeely, Steve. 2018. 'Big Data and Official Statistics.' in Sheryl Kruger Strydom and Moses Strydom (eds.), *Big Data Governance and Perspectives in Knowledge Management* (IGI Global: Hershey, PA).
Walter J. Radermacher

Internet of Things IoT

3 Σ



https://www.destatis.de/DE/Ueber-uns/Kolloquien-Tagungen/Kolloquien/2018/05_Borchers_Praesentation.pdf?__blob=publicationFile

FACTS ARE
CONFUSING ME



The world we live in

Data revolution: *"What steam was to the 19th century, and oil has been to the 20th, data is to the 21st"* (<https://rss.org.uk/RSS/media/File-library/Policy/2019/9522-RSS-Data-Manifesto.pdf>)

Data Society towards an IoT Society

Evidence based decision making: *"If you can't measure it, you can't manage it"*

(<https://blog.deming.org/2015/08/myth-if-you-cant-measure-it-you-cant-manage-it/>)

Audit Society towards an AI Society

Post-truth-politics: *"The 5% Unemployment Figure Is One Of The Biggest Hoaxes In Modern Politics"* (<https://www.youtube.com/watch?v=QMmk3oQ0Qil>)

Twitter Society

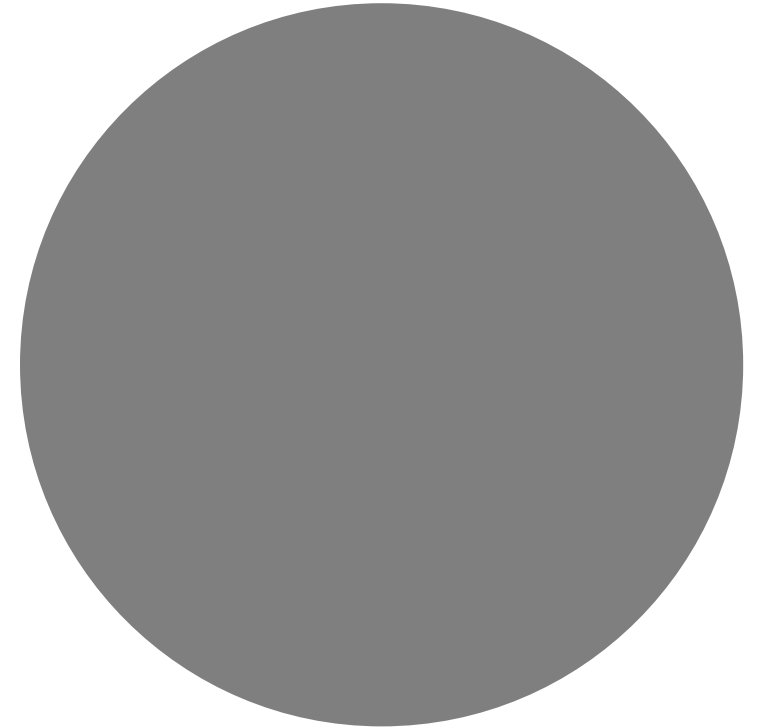
Globalisation of economies and crises: *"Planet at risk of heading towards 'Hothouse Earth' state"*

(<http://www.stockholmresilience.org/research/research-news/2018-08-06-planet-at-risk-of-heading-towards-hothouse-earth-state.html>)

Global Risk Society

Data4Policy

Data are given - Facts are produced

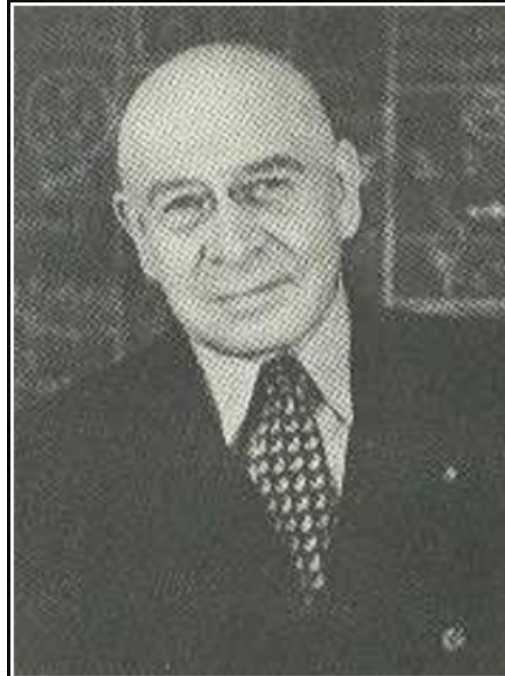




The best material model of a cat is another, or preferably the same, cat.

— *Norbert Wiener* —

AZ QUOTES



The map is not the territory, the word is not the thing it describes. Whenever the map is confused with the territory, a 'semantic disturbance' is set up in the organism. The disturbance continues until the limitation of the map is recognized.

— *Alfred Korzybski* —

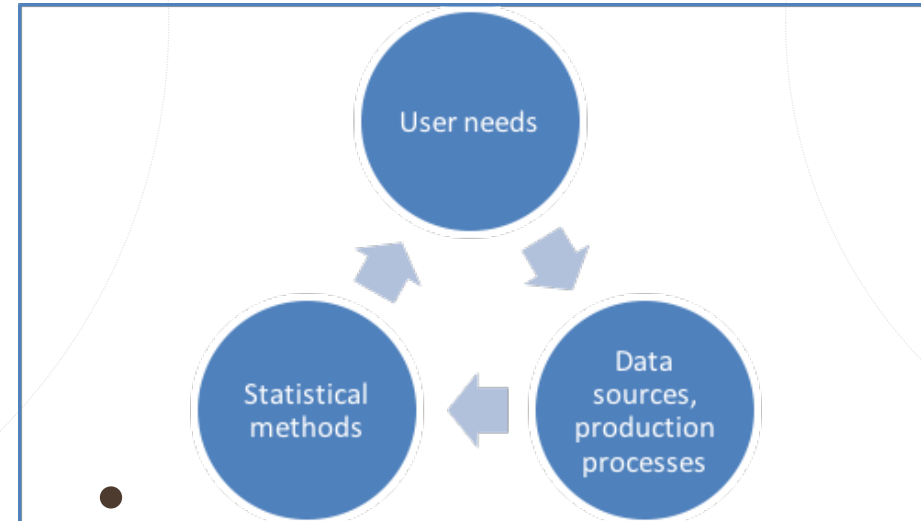
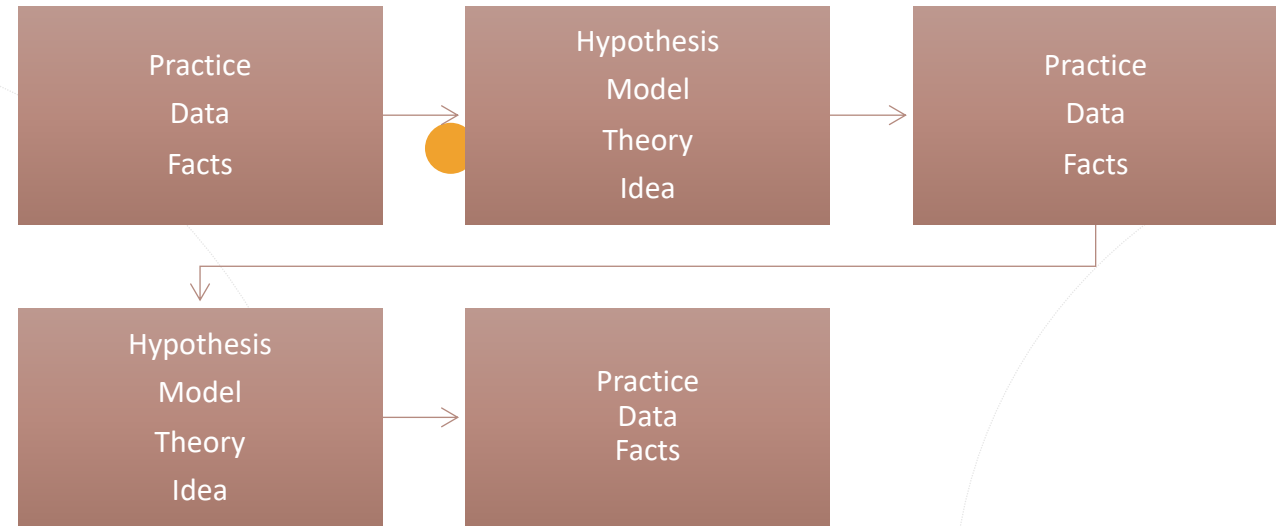
AZ QUOTES

How do we know what we know?

Epistemological position	Perspective
Naïve realism	Reality is an objective phenomenon that exists and can be measured independently of social and cultural processes.
Critical realism	Reality is an objective phenomenon, the measurement of which is mediated through social and cultural processes and can never be known in isolation from these processes
Relativism	Nothing is a reality in itself – what we understand to be a ‘reality’ is the product of historically, socially and culturally contingent ‘ways of seeing’

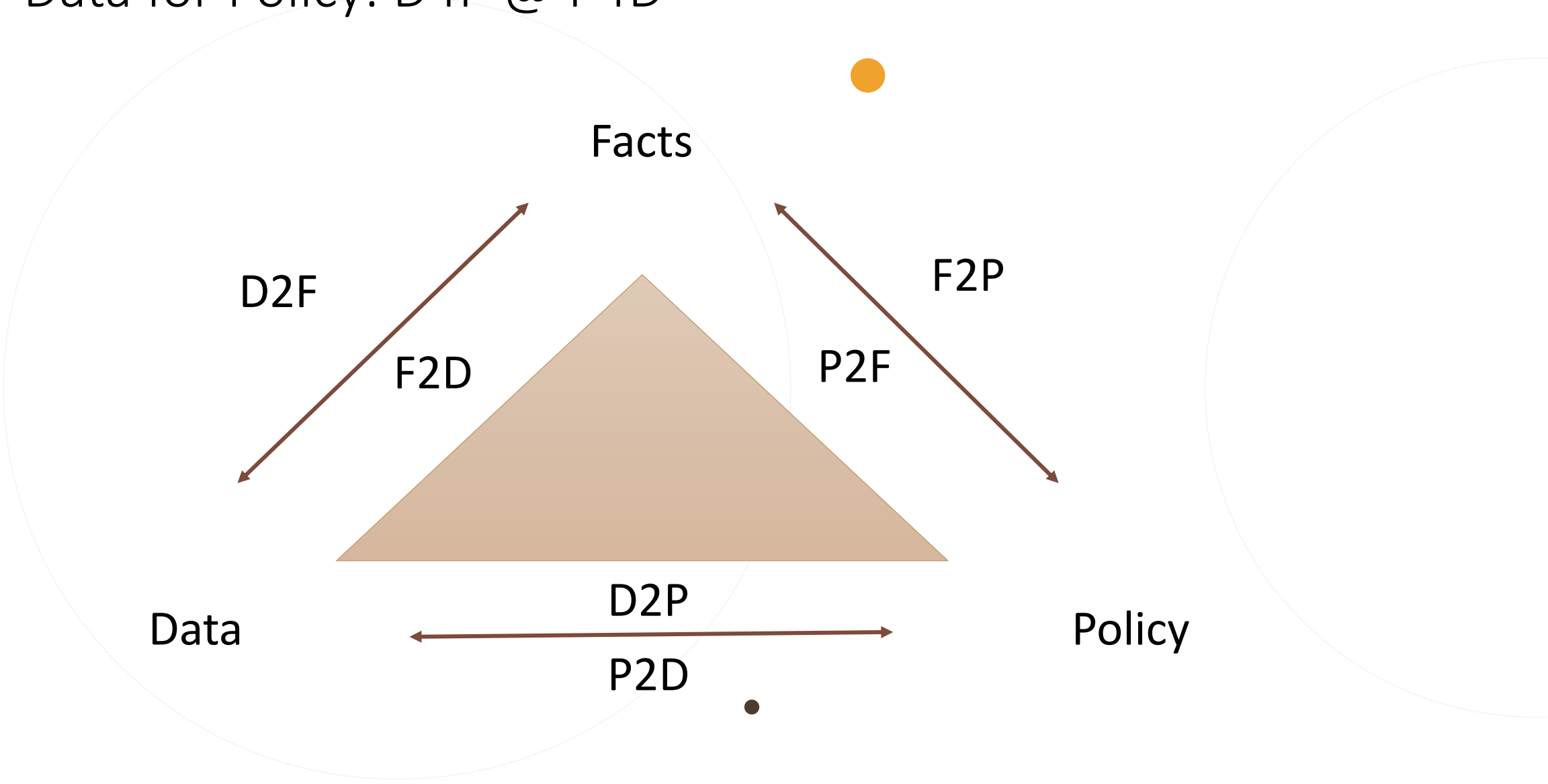
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Statistical learning & iteration btw deduction and induction



Data for Policy: D4P @ P4D

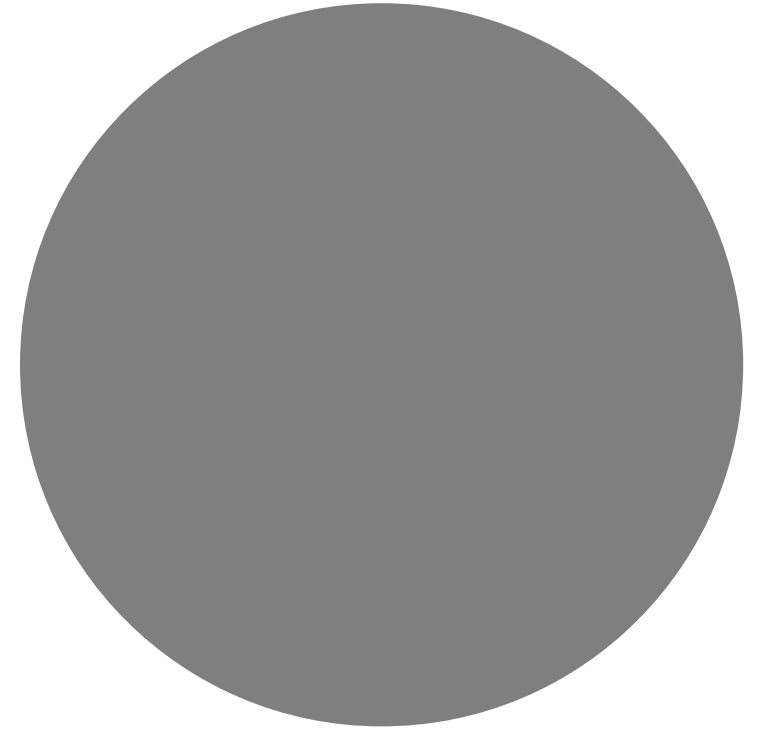
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Verified facts
High quality



Design, production, communication

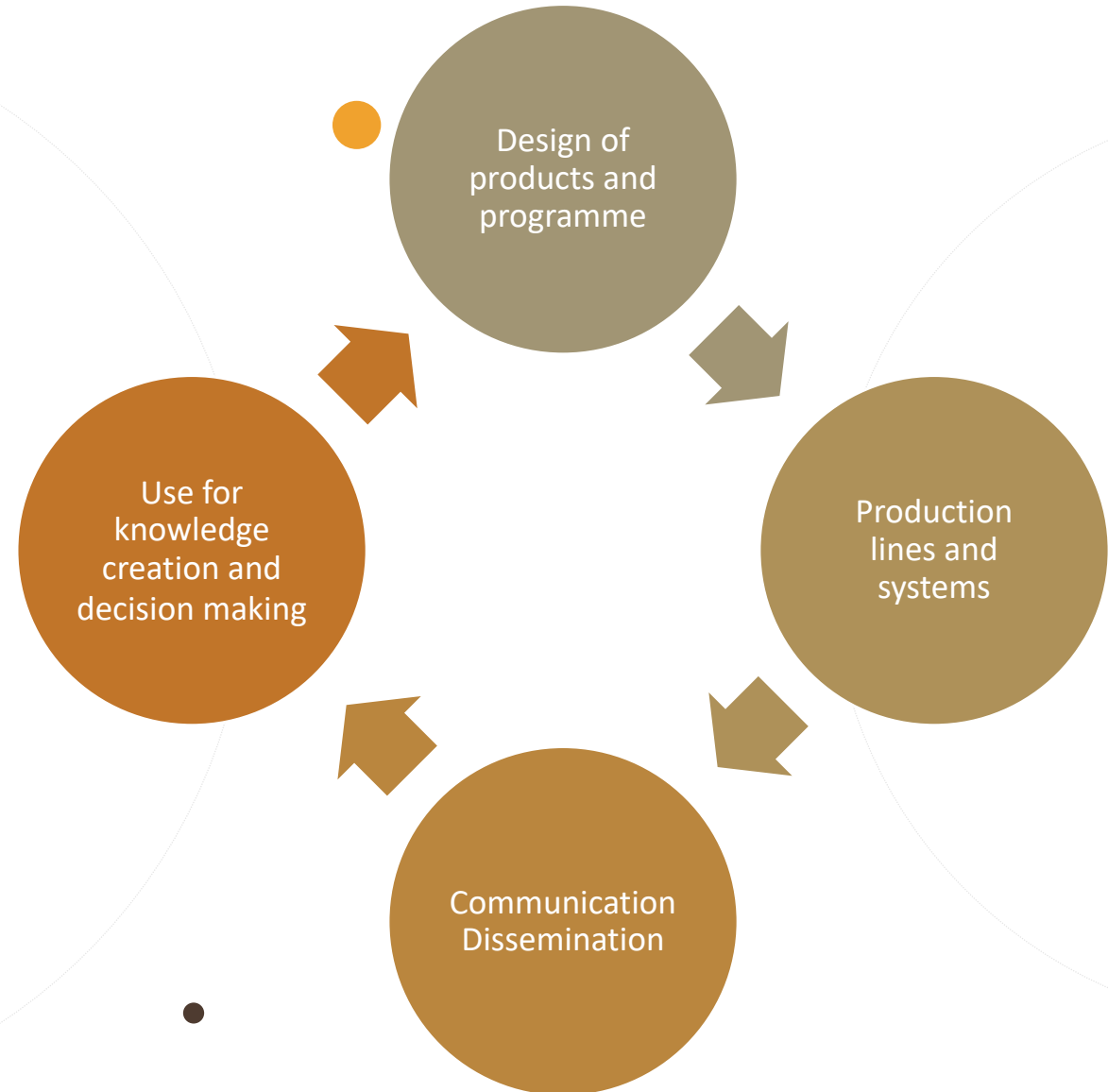


INFORMATION QUALITY SCALE	
Zone 1	
True statement	Verified facts
ZONE 2	
Distorted statements	Framing, acute angles, omission, "selected facts"
Unsubstantiated statements	Rumors (maybe true, maybe false)
ZONE 3	
False statements	False rendering of facts, in contradiction to these lies
Bullshit	False rendering of one's own motives and goals, misrepresentation, faking, dissolution of the separation between true and false
Fake News	Fake news, false reproduction of motifs and goals with simulation of journalism and thus truthfulness

Facts??
Verification??
???

Hendricks, Vincent F.; Vestergaard, Mads, 2018, "Post faktisch", München

Factory Statistics: main processes

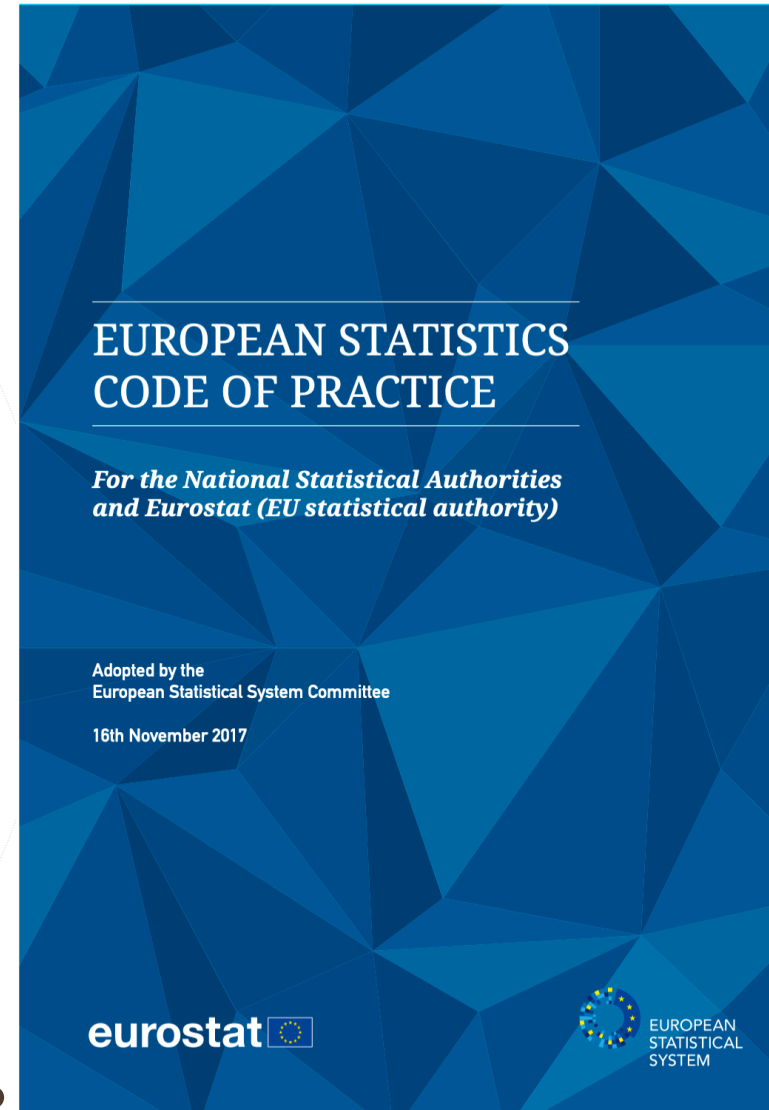


(Total) Quality Management

EFQM Modell 2019



<https://www.efqm.org/index.php/efqm-model/>



<https://ec.europa.eu/eurostat/documents/4031688/8971242/KS-02-18-142-EN-N.pdf/e7f85f07-91db-4312-8118-f729c75878c7>

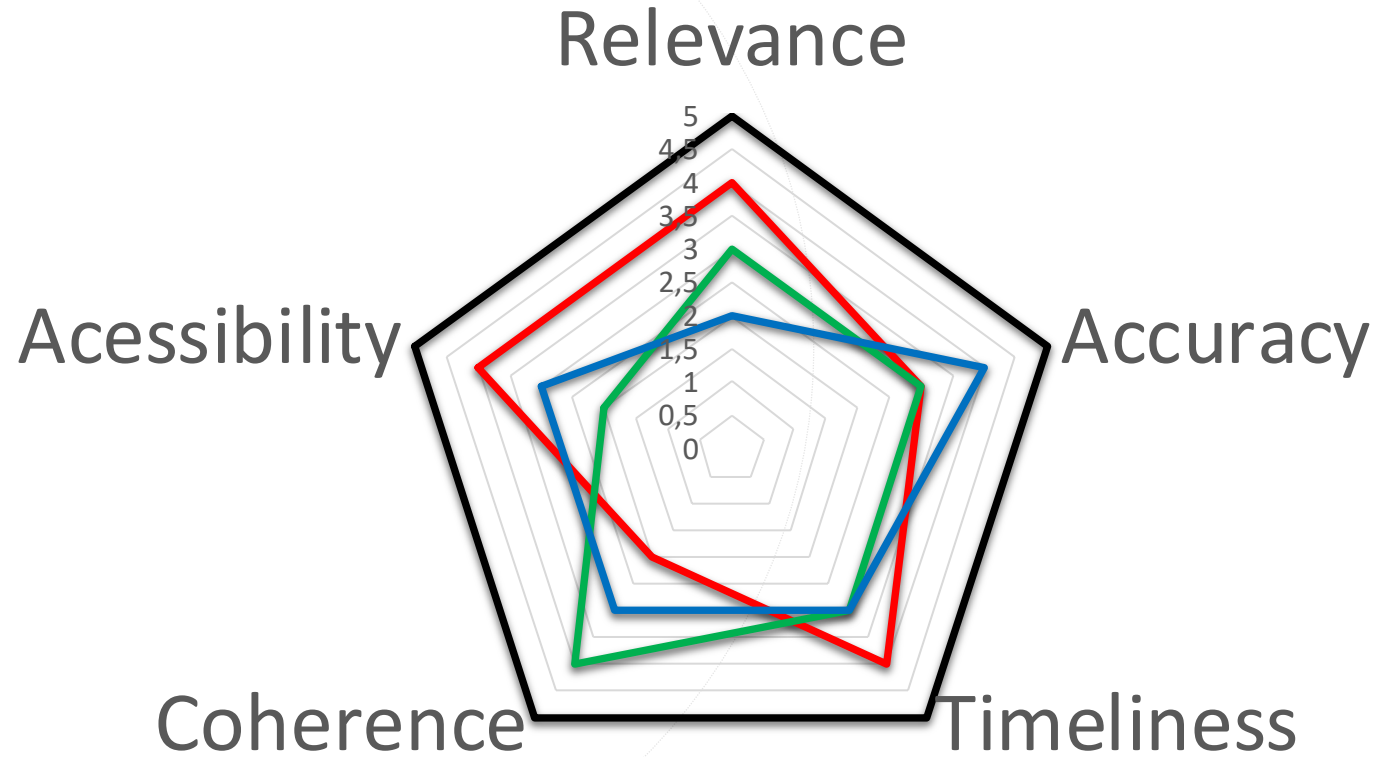
Verification: Code of Practice

3

Institutional environment	Statistical processes	Statistical output
<ul style="list-style-type: none">1. Professional independence1bis. Coordination and cooperation1. Mandate for data collection2. Adequacy of resources3. Commitment to quality4. Statistical confidentiality5. Impartiality and objectivity	<ul style="list-style-type: none">7. Sound methodology8. Appropriate statistical procedures9. Non-excessive burden on respondents10. Cost-effectiveness	<ul style="list-style-type: none">11. Relevance12. Accuracy and reliability13. Timeliness and punctuality14. Coherence and comparability15. Accessibility and clarity

Quality profiles of statistical products

— Indicators — Accounts — Basic statistics — Maximum



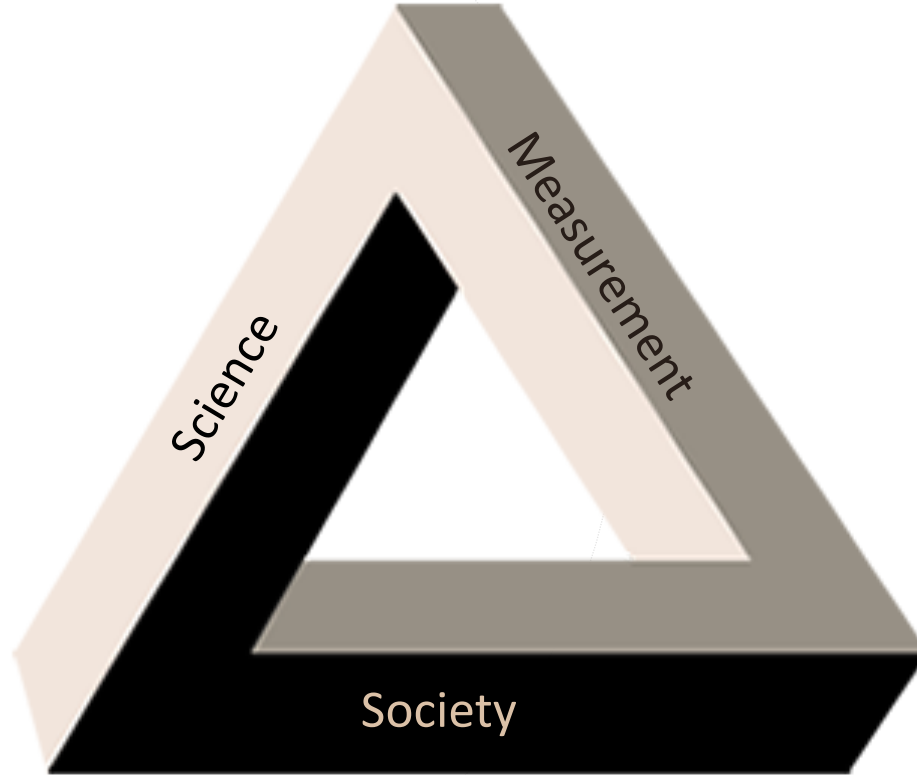
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National and
international

Official statistics =
public administration

Driving forces of change

3 Σ



History Official Statistics

PHASE 1.0

1800

Official statistics as an (administrative) component of the modern national state

Methodologies for descriptive statistics

1805
Königlich Preußisches Statistisches Bureau

1833
Statistique générale de la France

1834
Royal Statistical Society

1808
Normal distribution (C.F. Gauss, P.S. Laplace)

1839
American Statistical Association

1855
'Diagram of the Causes of Mortality' (F. Nightingale)

1871
Laspeyres price index

1900
Chi-square test (K. Pearson)

1901
Biometrika (F. Galton)

PHASE 2.0

1900

1925
'Statistical Methods for Research Workers' (R. Fisher)

Macro-economic statistics

Deepening and widening of methodology for modern (inferential) statistics

Sample surveys

Econometric modelling and decision theory

1936
Econometric modelling (J. Tinbergen)
Input-output analysis (W. Leontief)

1950
Decision theory and Bayesian approaches (A. Wald)
National accounts (S. Kuznets / R. Stone)
SNA 1952

1953
Sampling theory (W.G. Cochran)

PHASE 3.0

1970

1970
Mainframe computers, Spreadsheets, Population registers in Nordic countries

1980
PC Networks
German Volkszählungs-urteil and UK Data Protection Act

Computers, ICT

Data protection

Integration of new data sources

Register-based statistics

Adaptation of survey methodologies

European Statistical System

Transformation of statistical systems of former communist countries

PHASE 4.0

2010

2010
Machine to machine communication
Data from social networks
Enormous amounts of data
Privacy of information
Open data access
The role of private actors and the state
Civil society and institutions of the state
Signal and noise in the data deluge

Data revolution

Evidence based decision making

Globalisation

1990
Remote sensing (Corine Land Cover 1990)

2000
ICT, Cloud computing
Multiple Source – Mixed mode design of statistics

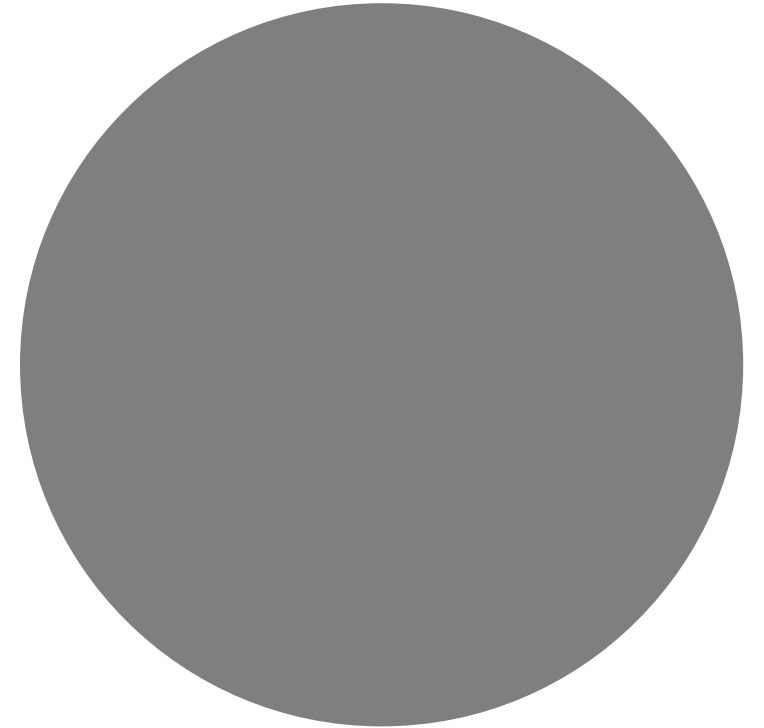
Principles of good governance

- Behaving with integrity, demonstrating strong commitment to ethical values, and respecting the rule of law
 - accountable not only for how much they spend, but also for how they use the resources
 - accountable for outputs, both positive and negative, and for the outcomes
 - accountable to legislative bodies
 - demonstrate the appropriateness of their actions, adhere to ethical values and respect the rule of law
- Ensuring openness and comprehensive stakeholder engagement
 - established and running for the public good
 - governing bodies ensure openness in their activities
 - using clear, trusted channels of communication and consultation
 - engaging effectively with all groups of stakeholders, such as
 - individual citizens
 - service users
 - institutional stakeholders

IFAC. 2014. *INTERNATIONAL FRAMEWORK: GOOD GOVERNANCE IN THE PUBLIC SECTOR - executive summary* (The International Federation of Accountants (IFAC) and the Chartered Institute of Public Finance and Accountancy (CIPFA): London).

Digitisation @ globalisation

New opportunities and challenges

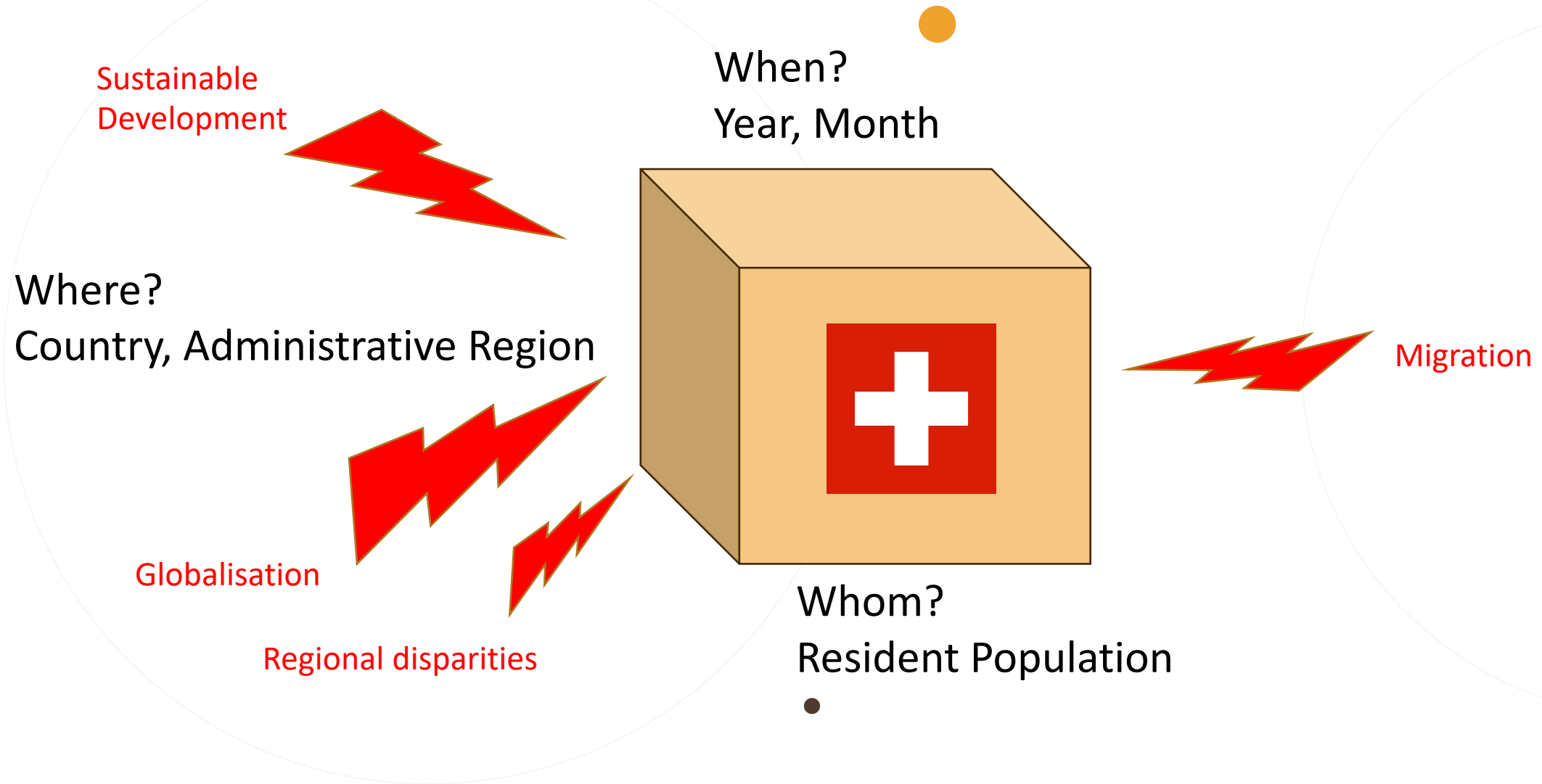


Guiding principles of Official Statistics 4.0

- **Statistics is key for people empowerment:** Statisticians should be aware of data's power to provide information and, hence, knowledge.
- **Open data is fundamental for open societies:** Statisticians should ensure open and transparent access to data and metadata and monitor their actual use for information and knowledge.
- **'Datacy' is a key enabler for citizens:** Statisticians should promote data literacy in society at large, and regularly monitor the levels of understanding.
- **The future is (trusted) smart statistics:** Statisticians should continue to invest in methods, algorithms and a business architecture that enhance the quality of data for statistical services tailored to users' needs.
- **Users participate in the design, production and communication of statistics:** Statisticians should foster a greater involvement of civil society in all stages and processes of statistical production.
- **More influence means more responsibilities:** It is the duty of statisticians to explore the link between statistics, science, and society, and to lead intellectual reflections on the possible risk of over-reliance on data-centrism

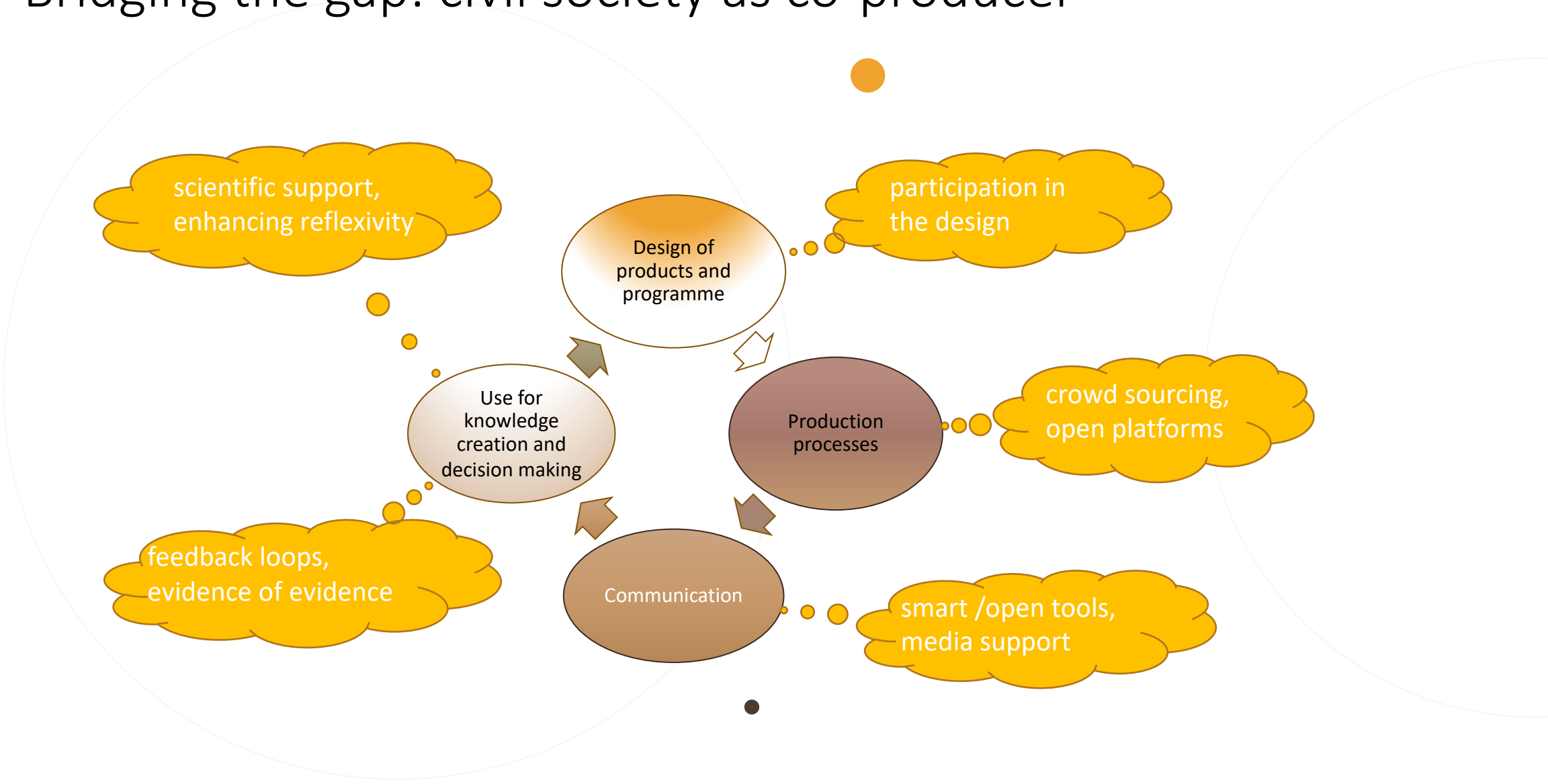
Glocalisation: Reviewing the national statistics paradigm

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Bridging the gap: civil society as co-producer

3



Closing the scientific gap

Teaching statistics



Doing Statistics

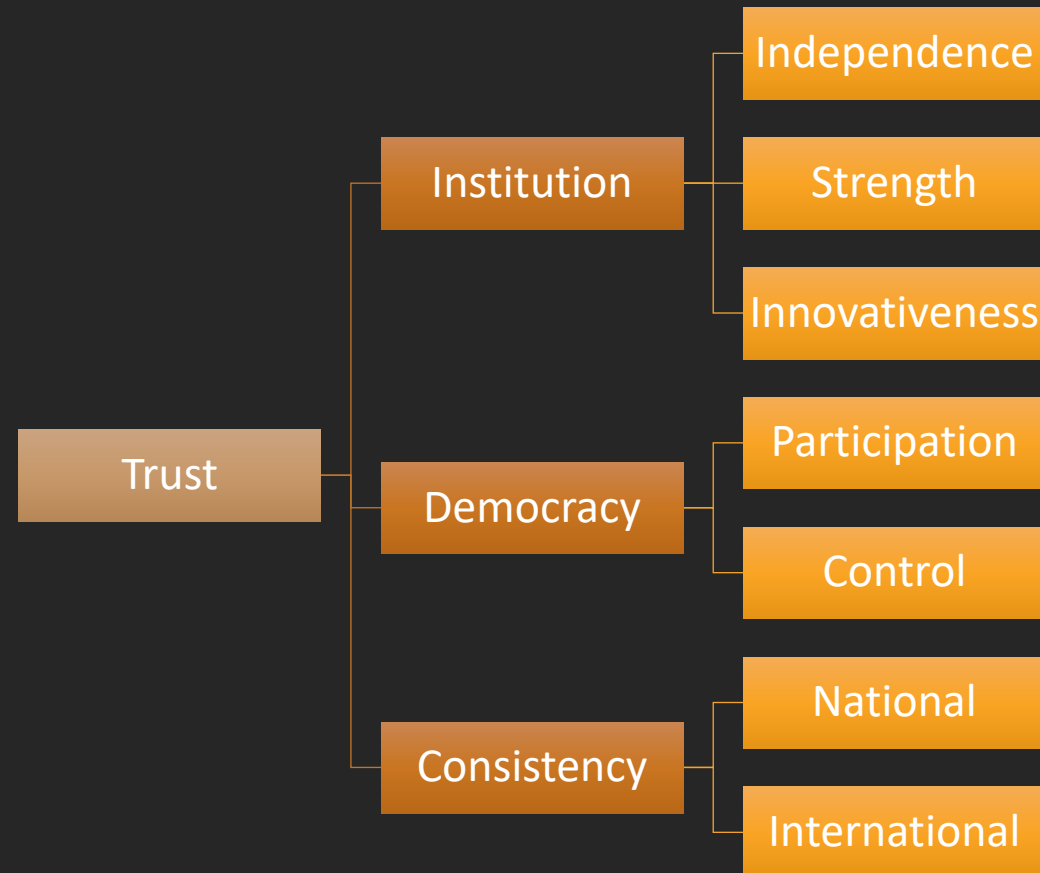


- Lack of scientific research, suitable textbooks and qualified training courses for official statistics
- There are many sciences contributing to research on processes of quantification and the impact of quantification within social contexts
 - A scientifically founded, conceptual operationalisation of statistical processes (in data collection, national accounts, indicators) requires more than the knowledge of specific statistical methods, informatics or data sciences
 - Other disciplines, such as sociology, historical, or legal disciplines to be taken on board

Policy4Data

Statistical governance in the new era

Policy relevance without being politically driven!



A World Statistical Independence Index?

2019 WORLD PRESS FREEDOM INDEX

MAP

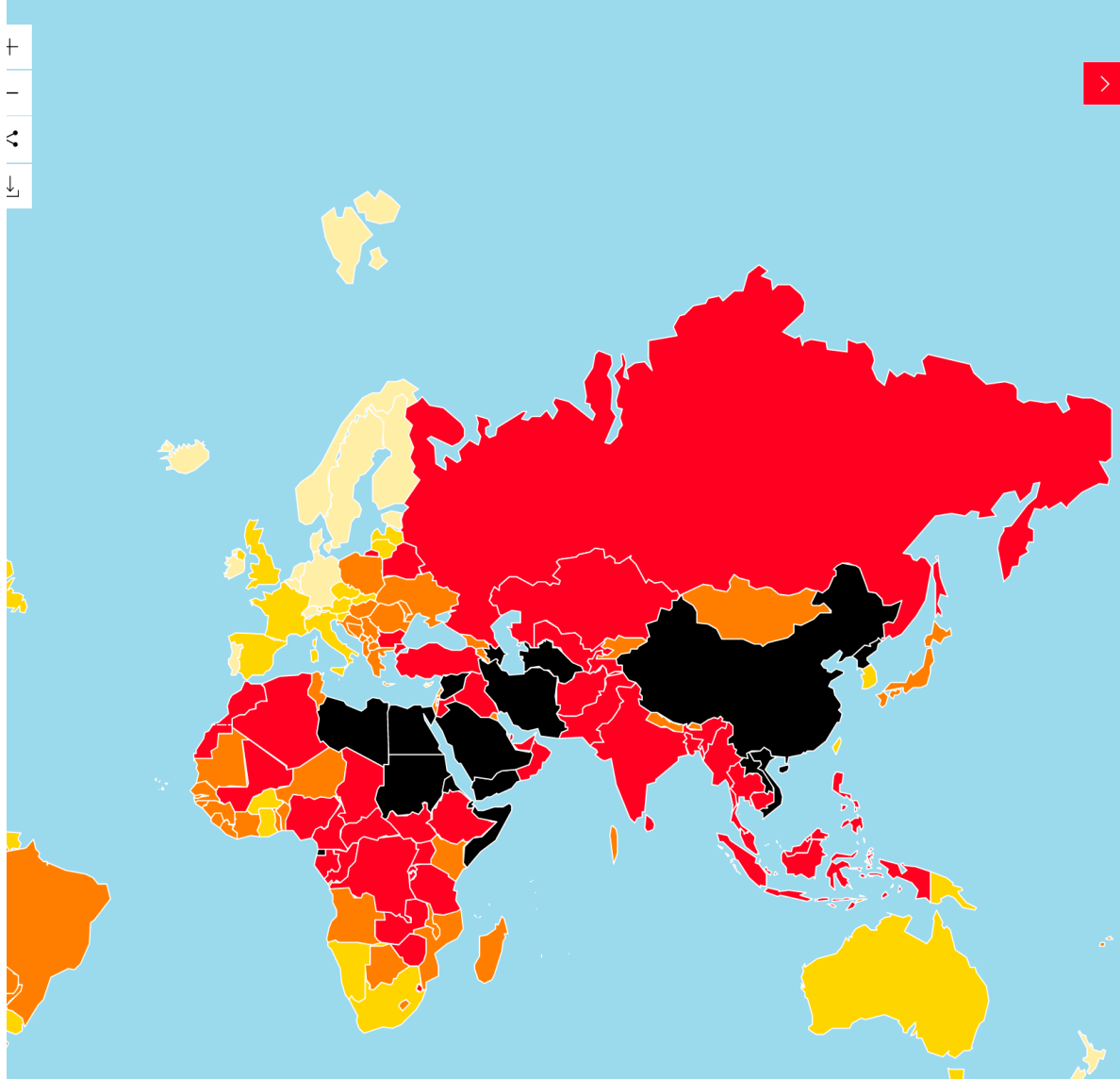
PRESENTATION

INDEX DETAILS

ANALYSES

METHODOLOGY

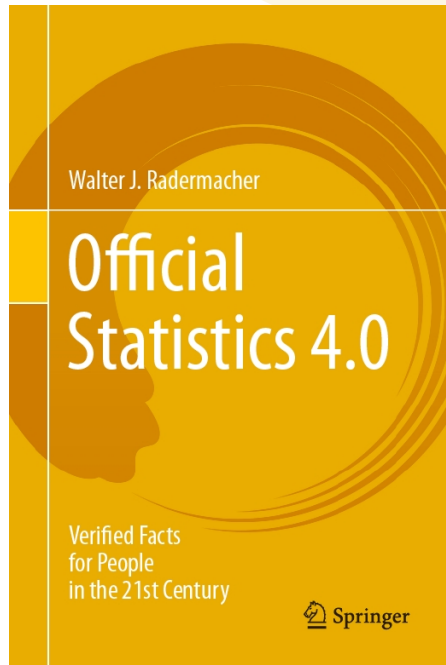
ARCHIVES






Search

1	Norway	7.82
2	Finland	7.90
3	Sweden	8.31
4	Netherlands	8.63
5	Denmark	9.87
6	Switzerland	10.52
7	New Zealand	10.75
8	Jamaica	11.13
9	Belgium	12.07
10	Costa Rica	12.24
11	Estonia	12.27
12	Portugal	12.63
13	Germany	14.60
14	Iceland	14.71
15	Ireland	15
16	Austria	15.33
17	Luxembourg	15.66

<https://rsf.org/en/ranking>



THANK YOU

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Official Statistics 4.0
Verified Facts for People in the 21st Century
<https://www.springer.com/gp/book/9783030314910>

Governing-by-the-numbers / Statistical Governance
Reflections on the future of official statistics in a digital and globalised society
SJIAOS, Dec 2019
<https://www.iaos-isi.org/index.php/journal>

