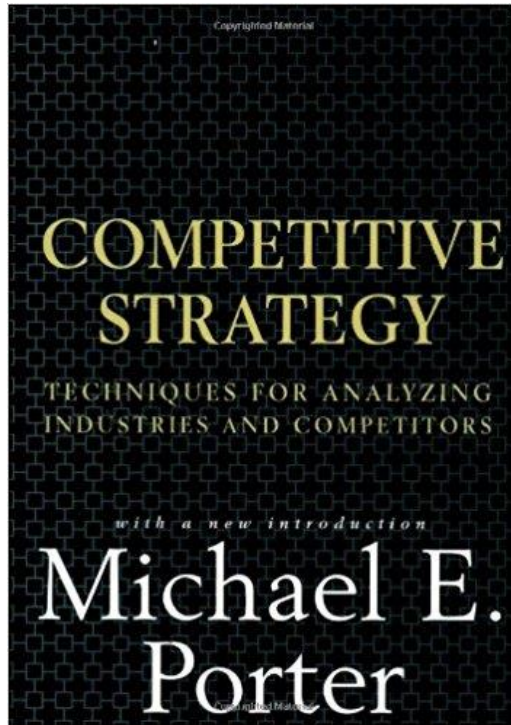


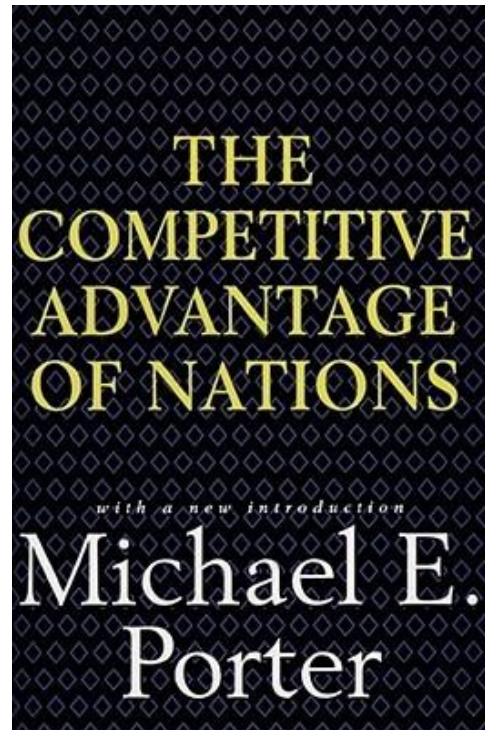
Science-, Policy-, Data-driven: Federating Indicator Communities

INDICATOR WORKSHOP, ISPRA, 22./23. 03.2018

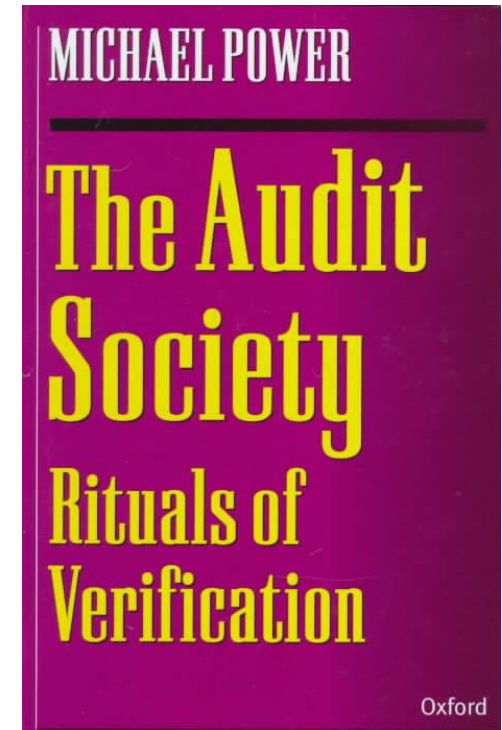
WALTER J. RADERMACHER



1980



1990



1994

Wikipedia on KPIs

Categorization of indicators

Key performance indicators define a set of values against which to measure. These raw sets of values, which can be fed to systems that aggregate the data, are called indicators. There are two categories of measurements for KPIs.

- Quantitative facts without distortion from personal feelings, prejudices, or interpretations presented with a specific value - objective- preferably numeric measured against a standard.
- Qualitative values based on or influenced by personal feelings, tastes, or opinions and presented as any numeric or textual value that represents an interpretation of these elements.

https://en.wikipedia.org/wiki/Performance_indicator

KPIs examples

Key performance indicators

Expected Outputs:

- 1- FAO Egypt 's office correspondences Archived
- 2- Filling system for data and documents established and maintained
- 3- Projects financial documents and reports compiled (annual and quarterly work plans and evaluation reports)
- 4- Expenditure and disbursements periodically monitored and reported to project manager
- 5- Operational, administrative and logistical support provided

Required Completion Date:

Outputs are expected to be achieved during the assignment. By end of assignment, all indicated outputs should be completed. More specific deadlines for each of the outputs can be set at inception.

http://www.fao.org/fileadmin/user_upload/VA/pdf/IRC4255.pdf

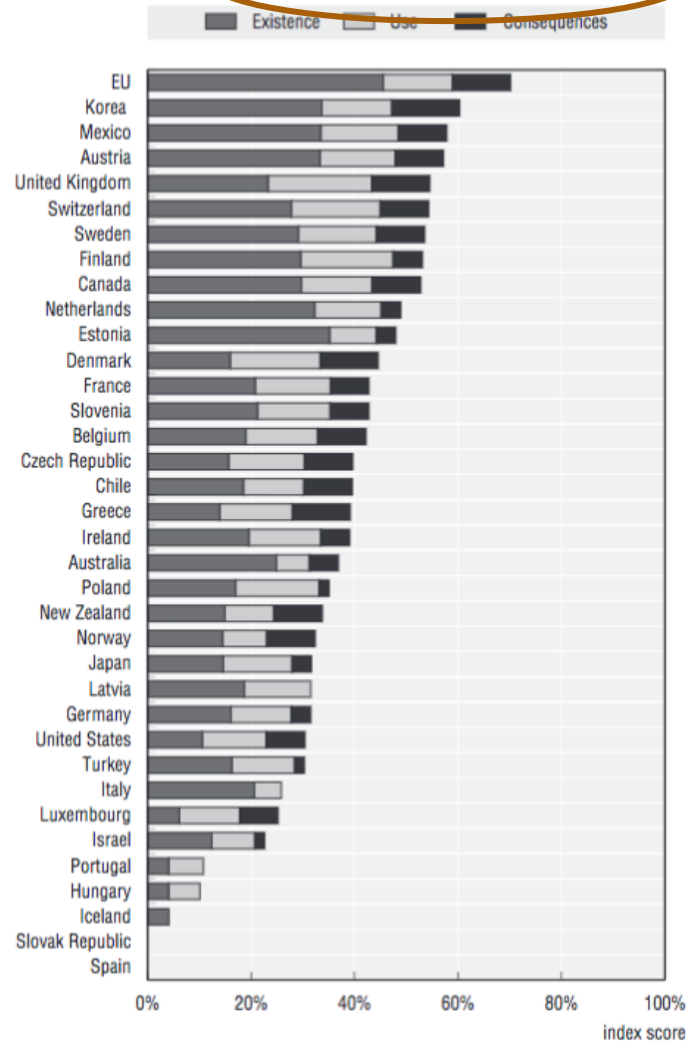
2. INDICATORS IN HORIZON 2020

2.1 Indicators and monitoring information

The legal basis of Horizon 2020¹ specifies a list of compulsory Key Performance Indicators to be taken into account in its evaluation and monitoring system. The fact that for the first time these Key Performance Indicators are identified prior to the start of the Framework Programme is a significant development as this provides a solid and coherent basis for the monitoring and evaluation system for Horizon 2020, coupled with the focus on measuring results and impacts of the Programme.

<https://www.ffg.at/sites/default/files/downloads/page/horizon2020indicators.pdf>

Figure 1.1. **OECD Performance Budgeting Index 2016**



Source: 2016 OECD Performance Budgeting Survey.

<http://ec.europa.eu/budget/img/budget4results/BudgetingAndPerformanceInTheEU.pdf>

Safest cities, 2

1. Tokyo
2. Singapore
3. Osaka
6. Sydney
10. Zurich
11. Frankfurt
15. San Francisco
18. LA
19. Chicago
20. London
21. NYC
24. Paris
27. Rome
32. Beijing
36. Shanghai
40. Istanbul
41. Moscow
43. Delhi
47. Riyadh
57. Jakarta

(Economist)

6:30 PM - 12 Mar 2018

Gover

UK

2014:

2015:

2016:

2017:

Franc

2014:

2015:

2016:

2017:

Germ

2014:

2015:

2016:

2017:

4:00 PM - 1

[CBS.nl Statistics Retweeted](#)

The Spectator Index @spectatorindex · Mar 11

Best work-life balance, 2018. (out of 38 countries)

1. Netherlands

2. Denmark

3. France

4. Spain

6. Norway

8. Germany

9. Russia

15. Italy

20. Canada

25. Poland

26. Brazil

28. UK

30. US

31. Australia

32. South Africa

34. Japan

35. S Korea

36. Israel

37. Mexico

38. Turkey

(OECD)

43

844

965



Provisional agenda and annotations

Provisional agenda

1. Election of officers.
2. Adoption of the agenda and other organizational matters.
3. Items for discussion and decision:
 - (a) Data and indicators for the 2030 Agenda for Sustainable Development;
 - (b) Handbook of Statistical Organization;
 - (c) Open data;
 - (d) Household surveys;
 - (e) Big data for official statistics;
 - (f) Regional statistical development;
 - (g) National accounts;
 - (h) Environmental-economic accounting;
 - (i) Statistics for economies based on natural resources;
 - (j) Agricultural and rural statistics;
 - (k) Climate change statistics;
 - (l) Statistical classifications;
 - (m) Refugee statistics;
 - (n) Disability statistics;
 - (o) Work and employment statistics;
 - (p) Ageing-related statistics and age-disaggregated data;
 - (q) Working methods of the Statistical Commission.

**Main points from the High Level Forum on Official Statistics –
Communicating data and statistics: Bringing trusted and actionable data to the
public, the media and policy-makers
Monday, 05 March, 2017**



<https://unstats.un.org/unsd/statcom/49th-session/documents/BG-Item3a-High-level-Forum-E.pdf>

UN WORLD DATA FORUM 2018



GLOBAL | 22. – 24. OCTOBER 2018 | DUBAI, UNITED ARAB EMIRATES

The Programme of the UN World Data Forum is organized around six main thematic areas covering a wide range of topics. Throughout the forum, participants will have opportunities to interact in plenary sessions, break-out spaces, innovation labs, knowledge sharing spaces, exhibits and virtual forums.

The thematic areas include:


- *New approaches to capacity development for better data*
- *Innovations and synergies across data ecosystems*
- *Leaving no one behind*
- *Understanding the world through data*
- *Building trust in data and statistics*
- *How far have we come?*

<https://undataforum.org/WorldDataForum/programme/>

iPad

15:49

85 %




CROS

Search

European Commission

Collaboration in Research and Methodology for Official Statistics

European Commission » Eurostat » CROS



A TO Z

GROUPS ▾

EVENTS ▾

NEWS ▾

HELP ▾

User panel

✓

Logged in via EU Login as *nradjose*.

From 18 October onwards, you will log in to CROS via "EU Login". Read more about it [here](#)

Technology for official statistics



Administrative data • Architecture • Data warehousing • Design • GIS • Information Technology • Information models • Metadata • Quality

Research, methodology and education



Catalogues • Education • Handbooks • Harmonisation • Journals • Methodology • Research • Skills • Standardisation

Data collection and integration



Big Data • Classification • Data collection • Data exchange • Data integration • Multisource statistics • Registers • Survey integration

Data analysis and dissemination



Data provision • Disclosure control • Dissemination • Estimation • Indicators • Microdata • Seasonal adjustment • Validation • Visualisation

Innovation in statistical domains



Business statistics • Culture • Demographic and social statistics • Energy • Health • Income and consumption • Information society • International trade and balance of payments • Labour • Living conditions, poverty and cross-cutting social issues • Macroeconomic statistics • Regional and small area statistics • Science and innovation • Tourism

Sustainability of processes or systems is generally evaluated with metrics or indicators. When a set of indicators is identified for a particular system of study, it is important to ensure that all the indicators are necessary and sufficient in defining system sustainability. The indicators should be able to distinguish sustainable process options from unsustainable ones. Generally, a large number of indicators are used to characterize a system. While some of the indicators are essential sustainable indicators, they may not be relevant in defining the particular system of interest. It is essential to select the most important indicators from a large set so that reduced set of indicators can enhance the generalized performance of sustainable process selection algorithm. In this paper, we propose the use of machine learning algorithms

Mukherjee, Rajib. 2017. 'Selection of Sustainable Process and Essential Indicators for Decision Making Using Machine Learning Algorithms', *Process Integration and Optimization for Sustainability*, 1: 153-63. <https://link.springer.com/article/10.1007/s41660-017-0011-4>

Indicators – a critical résumé

Inflation and proliferation

Anecdotal, spontaneous design

Fragmentation of methods and terminology, unnecessary variation

Scientific gaps

‘Plan B’, when hard facts are not available

Buzzword of modernisation (performance, efficiency, accountability)

Unrealistic expectations from the political, management level

Adaptations in practice at the expense of quality

Missing authority, mistrust, misuse





Our Values

Evidence-driven

We believe that the scientific method, and findings that result from its responsible use, are powerful tools for decision-making. As an organization, we base our political positions, advocacy and outreach efforts, and internal practices on best-available evidence. We also recognize that complex problems informed by science do not always have clear, scientifically-indicated solutions.

Inclusive

We integrate our commitment to diversity, equity, accessibility, and inclusion into all programming, outreach, and advocacy efforts. We advocate for policies enabling equal access to education, scientific careers, and scientific benefits, and work to support increasingly equitable scientific spaces. We amplify the work and voices of underrepresented scientists and members of underrepresented communities.

Nonpartisan

As nonpartisan political advocates, we act with the understanding that science does not belong to any political party, and that scientific evidence is an essential part of good policymaking at every level of government. As scientists and science supporters, we seek and present scientific consensus, acknowledge substantive debates, conduct our work with transparency, and operate with integrity regardless of the political environment.

Transformative

We do not merely react to the problems of today: we look forward, aspiring toward an inclusive, integrated vision for the future of science and science policy. We pursue creative, experimental, and novel approaches to overcome the longstanding challenges that stand in the way of a critical and scientifically-engaged society.

Adaptive

We are a reflective and self-critical organization that prizes ongoing internal evaluation and correction. We invite feedback and encourage challenging conversations, we listen, and we commit ourselves to recognizing and addressing our biases. We seek to identify gaps in existing resources, evaluate and share the effectiveness of our efforts, and regularly collect and report stakeholder feedback.

<https://www.marchforscience.com/our-mission>



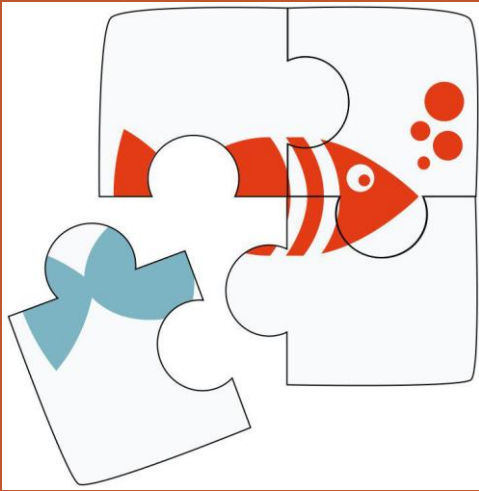
High Level Expert Group on Fake News and Online Disinformation

12 March 2018

The multi-dimensional approach recommended by the HLEG is based on a number of interconnected and mutually reinforcing responses. These responses rest on five pillars designed to:

1. enhance **transparency** of online news, involving an adequate and privacy-compliant sharing of data about the systems that enable their circulation online;
2. promote **media and information literacy** to counter disinformation and help users navigate the digital media environment;
3. develop tools for **empowering users and journalists** to tackle disinformation and foster a positive engagement with fast-evolving information technologies;
4. safeguard **the diversity and sustainability of the European news media ecosystem**, and
5. promote **continued research** on the impact of disinformation in Europe to evaluate the measures taken by different actors and constantly adjust the necessary responses.

<https://ec.europa.eu/digital-single-market/en/news/final-report-high-level-expert-group-fake-news-and-online-disinformation>



New Currents in Science: The Challenges of Quality

JRC Workshop
March 2016

Challenges to quality assurance in science and their effects on the trustworthiness of science, as knowledge, in applications and in policy. The challenges originate from the previous transformation from community-based 'little' science to industrial-scale 'big' science, which had effects on research-incentives and thus commitment and morale.

The present transformation, that we call 'information-age' science, has enabled new social practices and sources of commitment to emerge, both within and outside of established science, that offer new ways of resolving the challenges of quality assurance.

- For those involved in maintaining existing streams of production, application and advice, some key questions are: By what methodologies could the existing institutions accommodate to the new tendencies, for their mutual benefit?
- By what means, including dialogues and participation, could the new forms of practice be guided in the development of appropriate quality procedures?

<https://ec.europa.eu/jrc/en/event/workshop/challenges-quality>

Indicator Ecosystem Risks

Epistemology

- fact, model, truth, knowledge, evidence, theory/data
- misplaced concreteness, naïve positivism
- reductionism, over-specialisation
- uncertainty, risk, communication

Terminology

- indicator, variable, data, statistics, index, scoreboard, metrics
- output, outcome, objective, target

Quality

- producer, process, product portfolio
- independence, principles, governance, trust

Quantity

- data obesity, index addiction, indicator overkill,

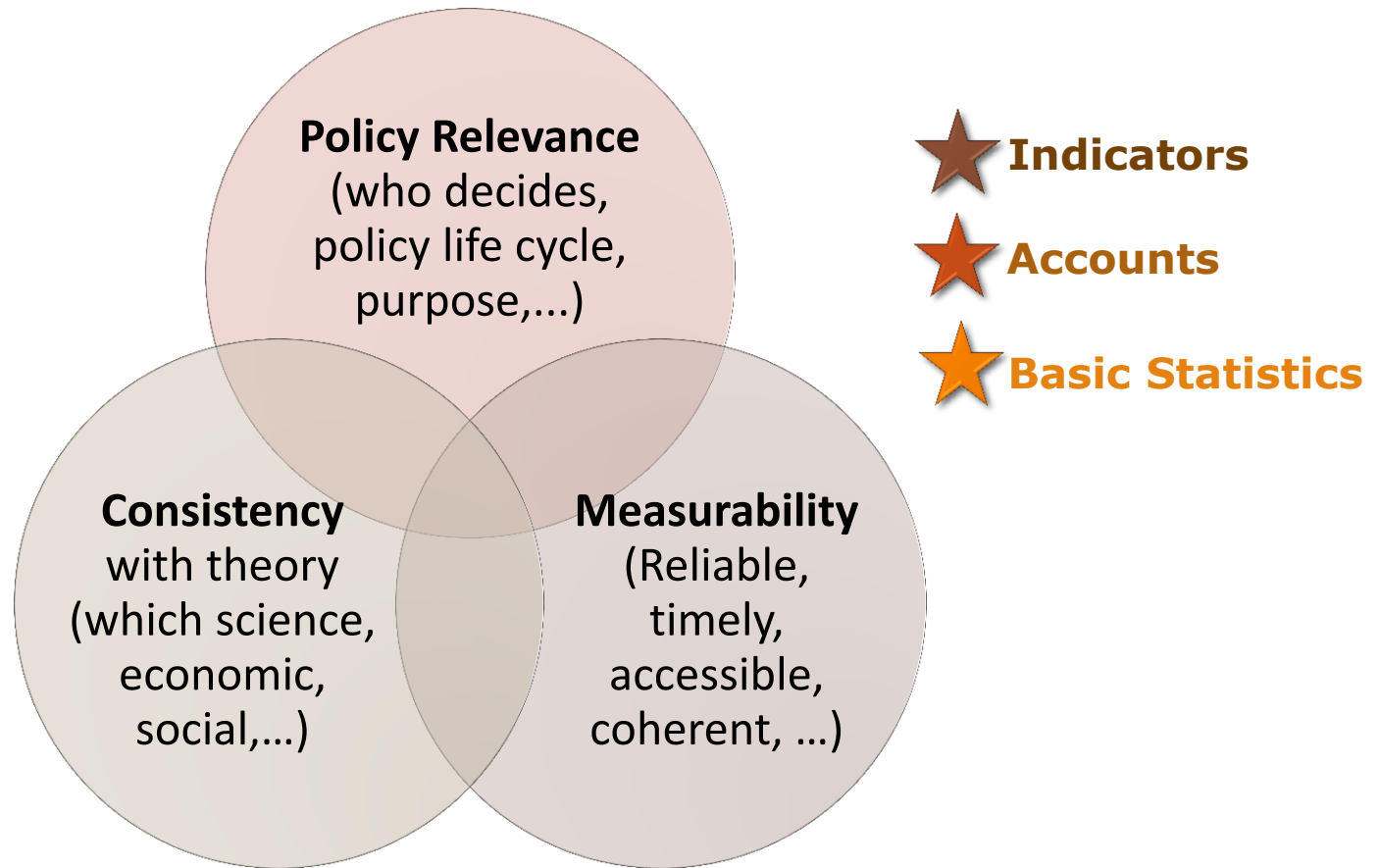
Complexity

- macro / micro, reductionism, artefacts, aggregated variables

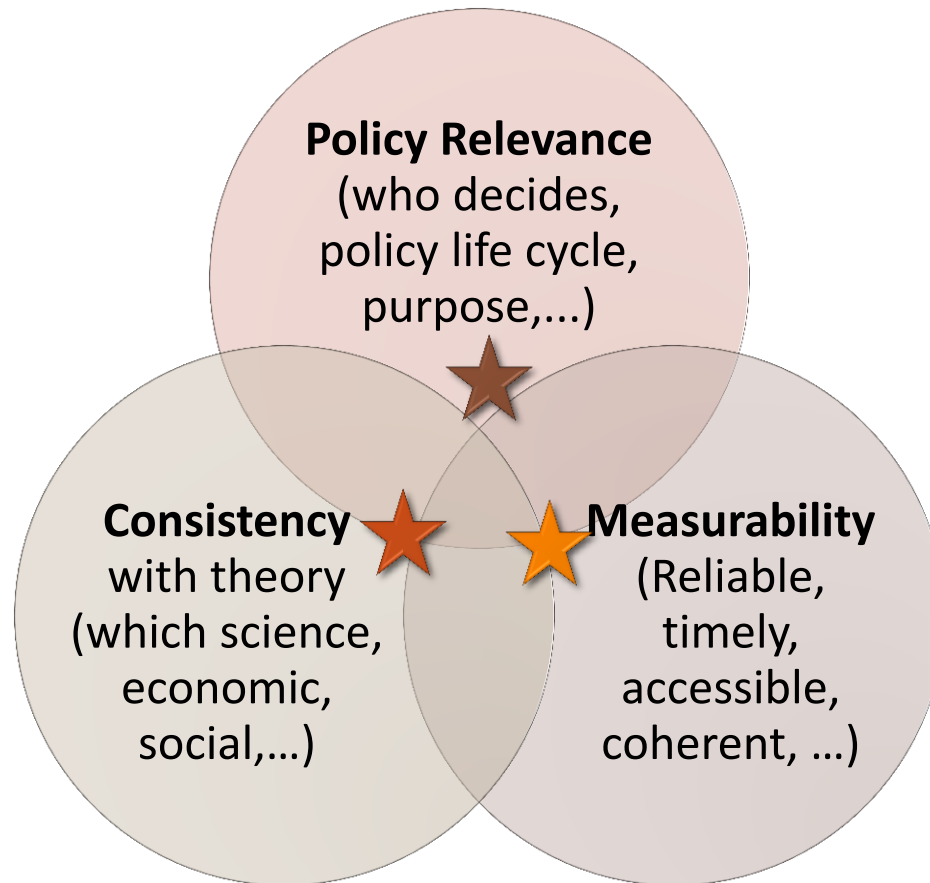
Democracy

- regime of experts, governance by numbers, social divide, disinformation

Quality = multidimensional



Quality = multidimensional

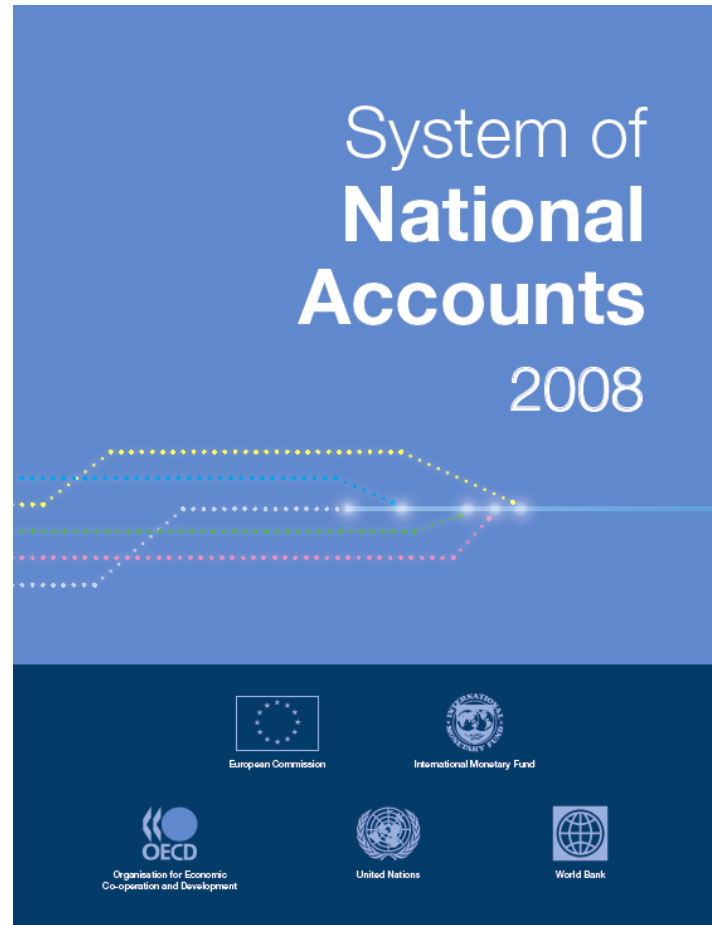


Indicators

Accounts

Basic Statistics

Benchmark National Accounts



▼ C. co sta

The 2008 SNA is the result of a process that was notable transparency and the wide involvement of the international statistical community, both of which were facilitated by the innovative use of a project web site. The process comprised six steps:

▼ D. Acknowledgements

in the project
agreed
(2007)
the
char
the
provisional recommendation

consultations with countries
presenting a set of recommendations to the Commission in 2007; and
incorporating the agreed recommendations into the 2008 SNA for approval by the Commission in 2008 and 2009 (2009).

Annex: Authors of Issues Papers Prepared for Task Forces, Groups and Committees Considering SNA Update Issues

Canberra II Group on the Measurement of Non-financial Assets

IMF Committee on Balance of Payments Statistics

IMF-BEA Task Force on Employers' Retirement Schemes

IMF-OECD Task Force on the Harmonization of Public Sector Accounts

OECD Task Force on Financial Services

OECD Task Force on the Measurement of Non-life Insurance

▼ Chapter 1: Introduction

A. What is the System of National Accounts?

▶ B. The conceptual elements of the SNA

▶ C. Uses of the SNA

▶ D. The boundaries of the SNA

▶ E. The SNA as a coordinating framework for statistics

▶ F. Links with business accounting

G. Expanding the scope of the SNA

▶ H. The SNA and measures of welfare

Conference on Research in Income and Wealth

The Conference on Research in Income and Wealth (CRIW) was founded in 1936 to advance the cause of measurement in economics. CRIW brings together economists from government, academe, business, and non-profit organizations to discuss problems of mutual interest. The CRIW is administered by the National Bureau of Economic Research, but membership in the CRIW is independent of NBER affiliation. Membership in the CRIW is by election and is based on a significant contribution to research in income and wealth, a sustained interest in research in this area, and continuing participation in CRIW activities. The principal activity of the CRIW is to hold conferences and workshops which deals with measurement issues in various areas of economics. Attendance at CRIW conferences is open to all interested participants.

<http://www.nber.org/CRIW/>

<http://www.iariw.org/>

The screenshot shows the homepage of the International Association for Research in Income and Wealth (I.A.R.I.W.). The header features the acronym "I.A.R.I.W." in large, serif font, with the full name "International Association for Research in Income and Wealth" below it. A navigation menu includes links for "About IARIW", "Membership", "Review of Income and Wealth", "Conferences", "Announcements", and "Links". The main content area is titled "IARIW Major Objectives" and lists two bullet points: "To advance education and knowledge in the general area of income and wealth by organizing conferences, by circulating scholarly papers accessible to the general public through the Association's website, and by publishing a quarterly journal which contains research on economics and statistics." and "To carry out its said objects and purposes in the following fields of interest: the definition, measurement, and analysis of national income and wealth; the distribution of income and wealth, and poverty; the development of systems of economic and social accounting and their use for economic policy, international comparisons, and other related economic and statistical matters."

About IARIW ▶ Membership ▶ Review of Income and Wealth ▶ Conferences ▶ Announcements ▶ Links ▶

History and Accomplishments

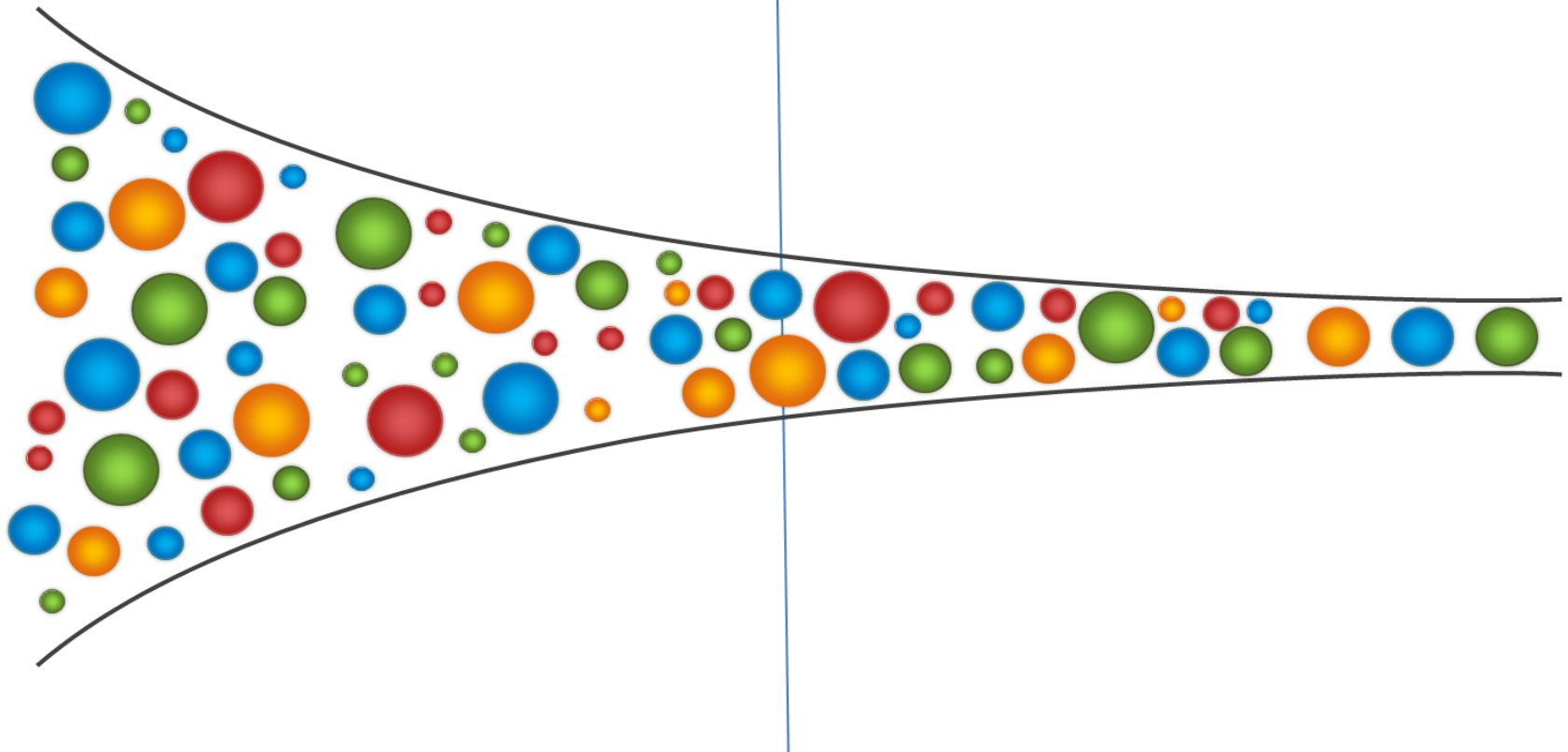
I.A.R.I.W.

The International Association of Research in Income and Wealth was founded in September 1947, in conjunction with a meeting of the International Statistical Institute. Its organizers were individuals who were actively engaged in national income accounting research or who, in their official or academic positions, had been instrumental in developing the important techniques in national income and national budgeting that had been implemented in a number of countries during World War II and the immediate postwar period.

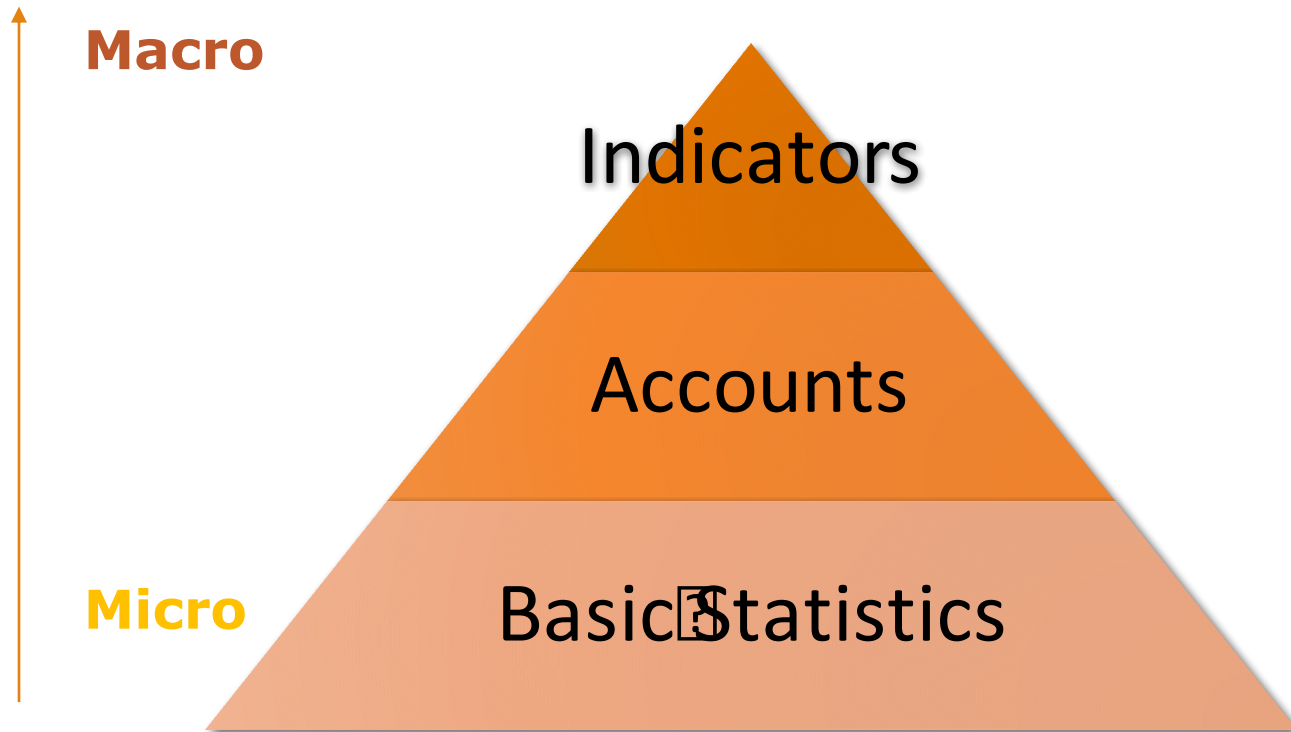
Reduction of complexity

From data to information

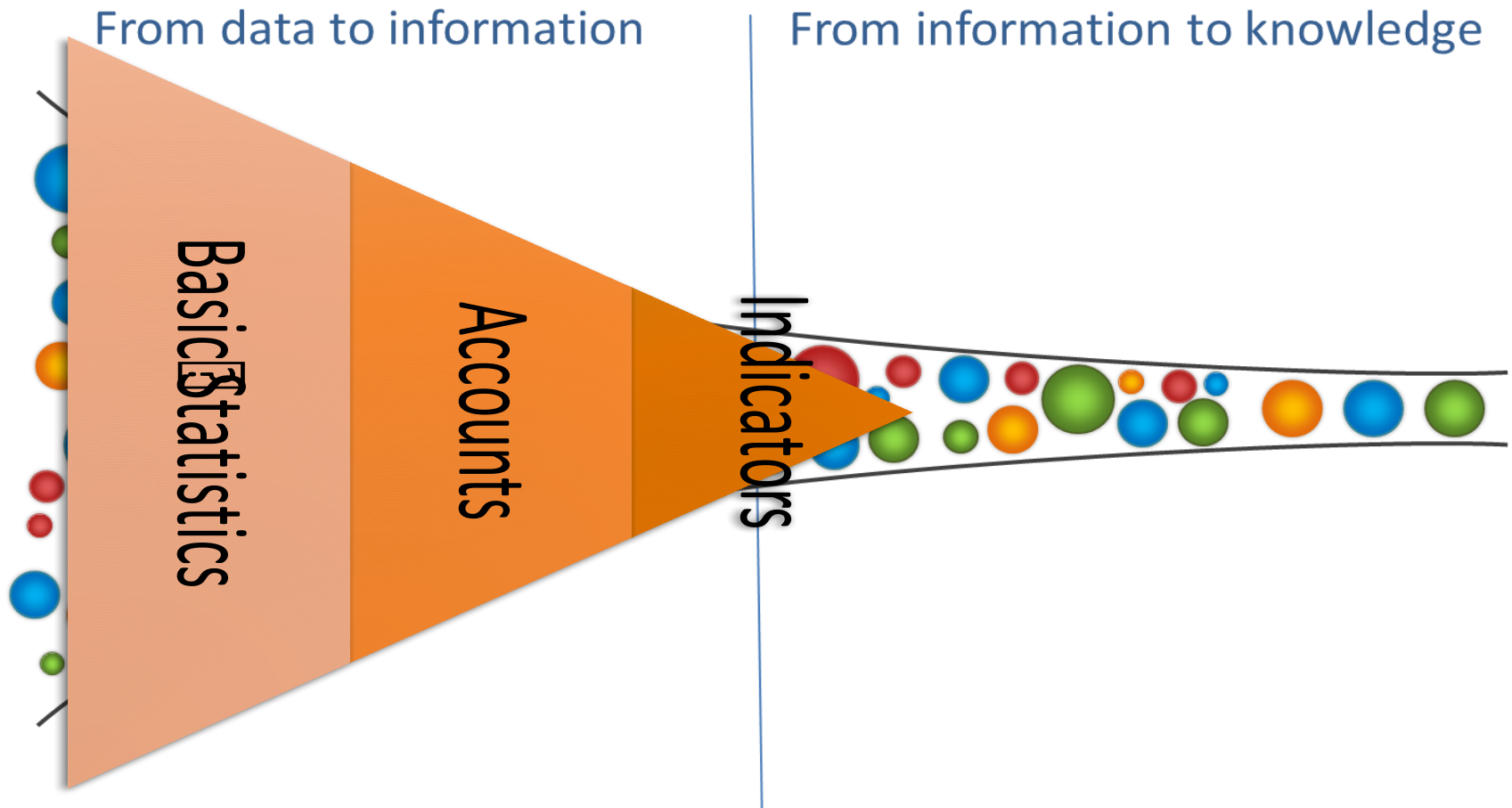
From information to knowledge



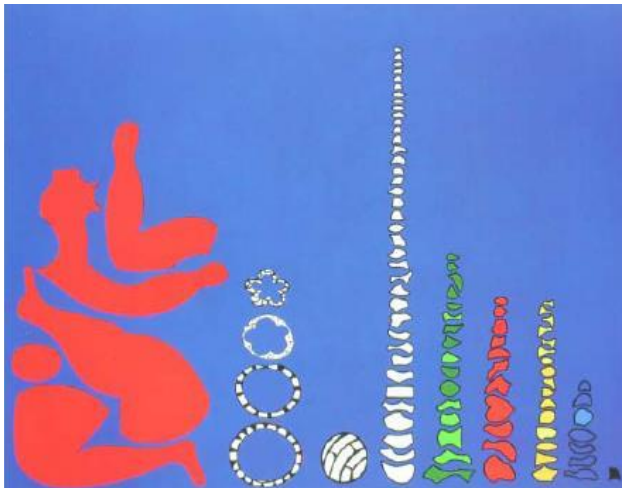
Information Pyramid



Information Pyramid



Basic Statistics - Accounts



Wehrli, U.: Kunst aufräumen. Kein & Aber, (2002)

http://www.efta.int/sites/default/files/documents/statistics/training/adminreg/Russian/Session_2_SEEA-CF_Hass.pdf

Lessons from National Accounts

Standardisation: pays back, after years of investment

Consistency with theory: essential for the design of the statistical model

Coherence: ensures sustainability, comparability, cross-border analysis

Scaling: allows different uses in policy life cycles

Ordering function: crucial for the entire information pyramid

Partnerships: federating different accounting communities in academia, statistics and application

Lessons for indicators

Standardisation: reduction of confusing and unnecessary variation

Consistency with theory: less feasible, context more diverse (which theory?)

Coherence: objective for specific areas of application (e.g. SD)

Scaling: links to statistics and accounts

Ordering function: crucial for the entire information pyramid

Partnerships: federating different accounting communities in academia, statistics and application

Towards a common interpretation: 'indicators', their role and function



Indicators: strengths and limits

Promote epistemological knowledge and sensitivity amongst scientists, practitioners and users

Promote media and information literacy to counter disinformation

Improve evidence about the impact of indicators through market research and impact assessments

Promote research on the impact of disinformation

Promote a focus on quality and be critical with unrealistic expectations

Make use of state-of-the art aggregation methods, minimising normative ingredients

Be transparent, when normative components (judgements, weights, values) are mixed with observation based indicators

From data to knowledge

Connect indicators with other components of the information value chain

Facilitate scaling (zooming in and out)

Make use of the complementarity of statistical tools (in particular accounts)

Make use of the ordering function of indicators in the design, production and communication of statistics

Promote indicator related research and innovation

Promote indicator related methodological competencies with appropriate training

Partnerships, trust, governance

Establish platforms and channels that facilitate communication amongst scientists, indicator producers and users of indicators

Find regular opportunities for indicator related exchange of views in (international) conferences

Develop tools for empowering users and journalists to tackle disinformation and foster a positive engagement with fast-evolving information technologies

Safeguard the strengths and independence of institutions and researchers working in the area of indicator development, production and knowledge management

Enhance transparency about the quality of indicators and compliance with ethical principles and good governance guidelines

Thank you

WJR@OUTLOOK.DE

