



Better data. Better lives. Statistics to serve society.

34th IARIW General Conference

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Walter J. Radermacher

The world we live in

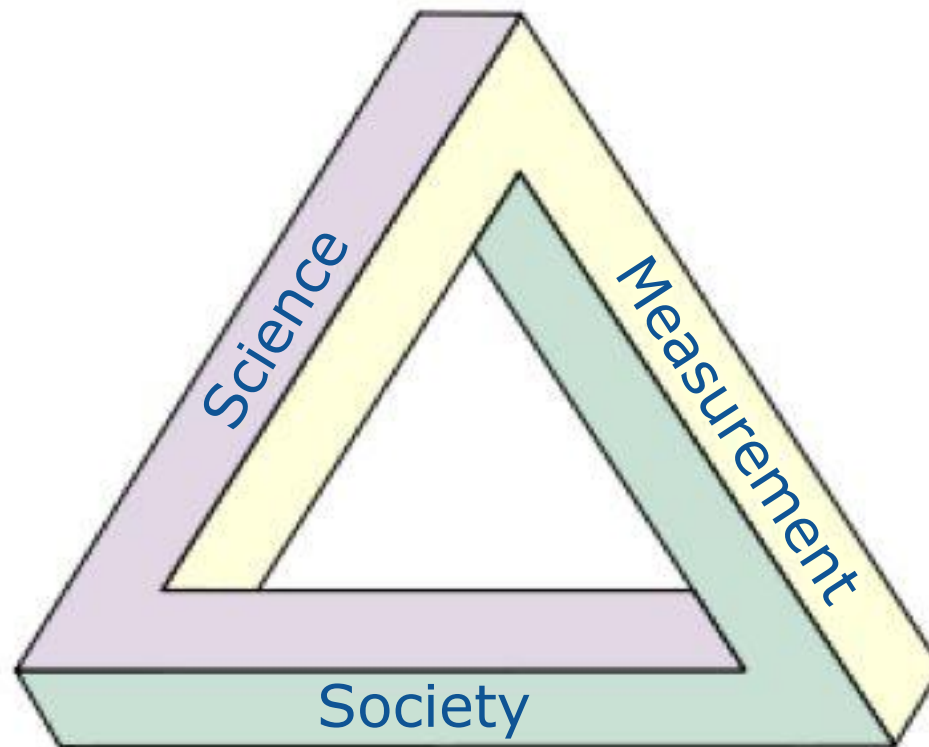
- *Data revolution: "What steam was to the 19th century, and oil has been to the 20th, data is to the 21th."* (<http://www.rss.org.uk/Images/PDF/influencing-change/rss-data-manifesto-2014.pdf>)
- *Evidence based decision making: "if you can't measure it, you can't manage it."* (<https://blog.deming.org/2015/08/myth-if-you-cant-measure-it-you-cant-manage-it/>)
- *Post-truth-politics: "The 5% Unemployment Figure Is One Of The Biggest Hoaxes In Modern Politics."* (<https://www.youtube.com/watch?v=QMmk3oQ0QiI>)

Lessons learnt from history

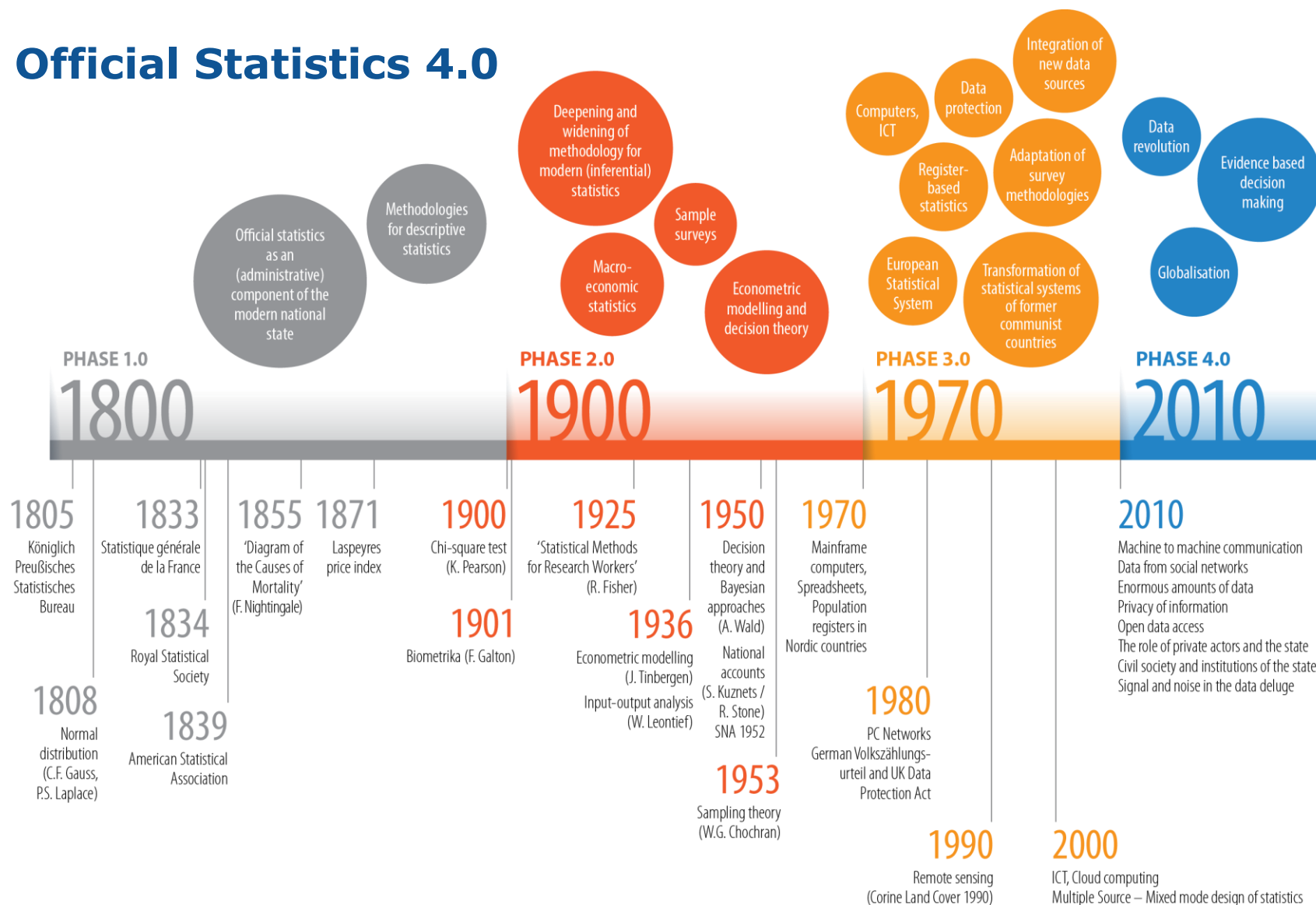
STATISTICS

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Driving forces



Official Statistics 4.0



A. Desrosières, Words and Numbers, in The mutual construction of statistics and society, New York, 2011 pg. 45

Table 2.1 The State, the Market, and Statistics

	Conceptualization of Society and of the Economy	Mode of Action	Forms of Statistics
Engineer State Production and people (since the seventeenth century)	Hierarchically structured institution, rationally organized France, from Colbert to De Gaulle; USSR.	Optimization under constraint. Reduction of costs. Planning. Technocracy. Major work projects. Long term vision.	Demography. Production in physical quantity. Input-output table. Material balance.
Liberal State Trade and prices (since the eighteenth century)	Physiocracy. An extensive market. Free competition	Fight against corporatism. Free-trade philosophy. Anti-trust laws protecting competition.	Statistics promoting market transparency: (e.g., American agriculture). Measurement of possible dominant position. Market shares.
Welfare State Waged work and its protection (since the end of the nineteenth century)	The labor market is not a market like any other, it has to be protected.	Laws on working hours, accidents, unemployment, and retirement benefits. Compulsory insurance systems ensuring social rights.	Labor statistics. Wage, employment, unemployment. Sampling surveys of workers' household budgets. Consumer price indexes.
Keynesian State Global demand and its components (since the 1940's)	The market cannot function on its own without generating crises. It must be regulated at a global level.	Supervising and managing the occasional gap between global supply and demand through monetary and budgetary policies.	National accounting. Analysis of the economic situation. Economic budgets.
Neoliberal State Polycentrism, incentives; Benchmarking (since the 1990's)	An extensive market. Free and undistorted competition Financialization Distributing the decision-making centers into a network.	Moving from rights to incentives: e.g., bonus-malus, polluting-rights market. Turning administrations into agencies. Contractualization Coordination by emulation: e.g., the European OMC	Objectification of new areas of equivalence Objectification of statistics. Construction and use of indicators to evaluate and classify performance. Benchmarking supplements, or replaces, directives and regulations.

Risk Society - Reflexive Modernisation*

- *The individual in a risk society*
- *Drivers of risk and uncertainty (e.g. globalisation, externalities and by-products of the modern life, distribution of the known and unknown facts)*
- *Limited solution powers of national states*
- *Trust and mistrust vis-à-vis political decision making mechanisms, technical experts, media etc.*

* Zinn, J.O.: Social Theories of Risk and Uncertainty: An Introduction, Malden 2008

Interaction between statistical indicators and public policies: possible stress!



Goodhart's Law

"When a measure becomes a target, it ceases to be a good measure"

Evidence based decision-making: risks

- *Consequences on evidence gathering*
 - Searching under the lamp post
 - ...
- *Consequences for decision-making*
 - Filter in public perception and political debate (e.g. GDP)
 - ...
- *Long-term consequences*
 - Democratic impacts, dominance of technocrats (measurement mandarins), in-transparency, loss of participation
 - ...
- *Feed-back loops*
 - Decision based evidence making
 - Evidence instead of decision making

Limitations in communication

- *Innumeracy, statistical literacy, data literacy*
- *Wrong expectations*
- *No appetite for quality food*
- *Using heuristics, expecting precise measurement*
- *Scientific overkill*
- *Naivety, blind faith*
- *Cleverness, political pressure*

Σ: Official statistics 4.0 and society

- *Misunderstanding the real meaning of indicators by a society with a poor level of statistical literacy can create a wrong state of opinion, so misleading the voters or compelling politicians to take non-optimal measures*
- *Dominance of technocrats (measurement mandarins) versus dominance of demagogues/politicians.*

A New Enlightenment: Statistics

- *cooperate with stakeholders in development, production and communication of statistics*
- *understand the limits of measurement, in particular concerning the by-products of modernity*
- *articulate a notion of caution, whenever proposals for measuring the unmeasurable are made*
- *understand what influences (mis-)trust of lay persons in experts and political mechanisms*
- *apply the lessons learnt in other fields of technologies using the methods of Science and Technology Studies (S&TS)*
- *revise professional ethical standards in the lights of these new challenges*
- *make official statistics independent, strong and innovative as a trustworthy provider of a modern and democratic information infrastructure*

Information @ Society

Citizens
making choices,
when consuming and when voting
being politically active,

...

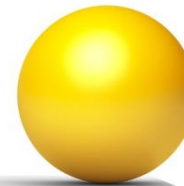


Media

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Policy
defining goals & targets
financing implementation
accountability

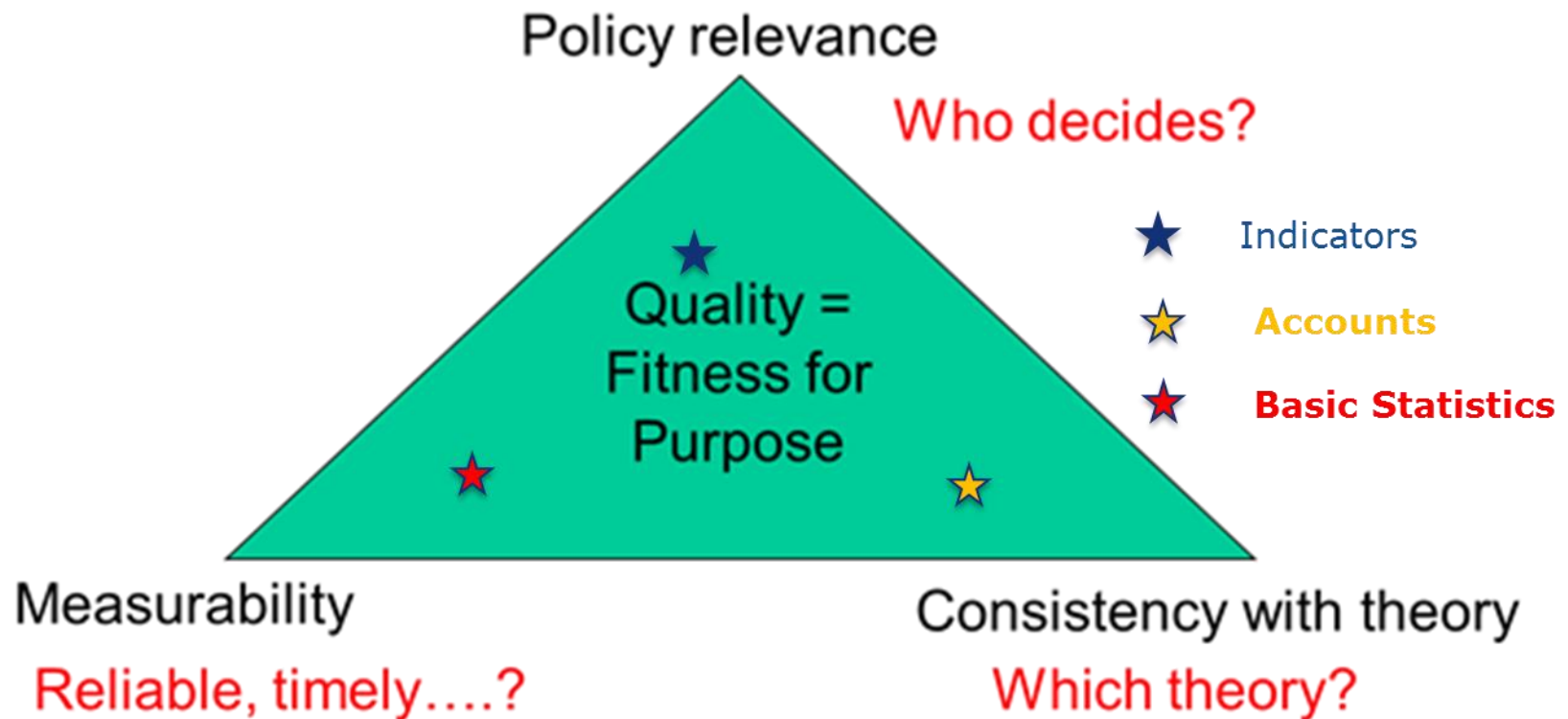
...



Information
from data to knowledge

...

Quality@indicator.statistic.account



How to provide high quality information for

SUSTAINABILITY, GROWTH AND WELL-BEING

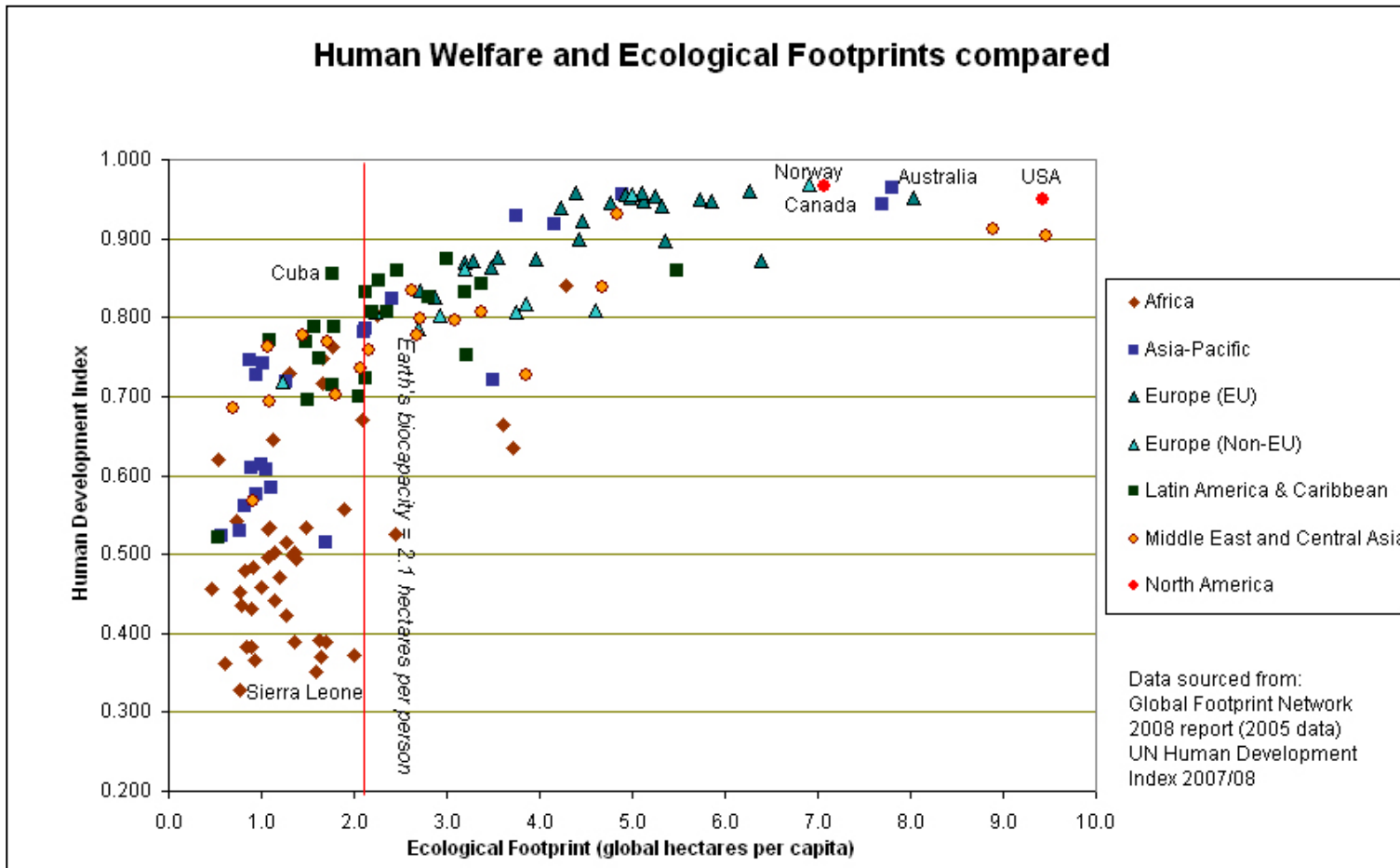
Focus: Scientific consistency*

"Measuring total national wealth

- $TNW = pFF^* + pRR + pNN + pHH + pSS$
- *TNW denotes total national wealth, F, R, N, H and S are financial, produced, natural, human and social capital, respectively,*
- *the p's are associated theoretical accounting prices defined as the well-being effects of marginal changes in the corresponding types of capital"*

*[*http://www.oecd.org/greengrowth/41414440.pdf](http://www.oecd.org/greengrowth/41414440.pdf)*

Focus: Communication



https://en.wikipedia.org/wiki/Ecological_footprint#/media/File:Human_welfare_and_ecological_footprint.jpg

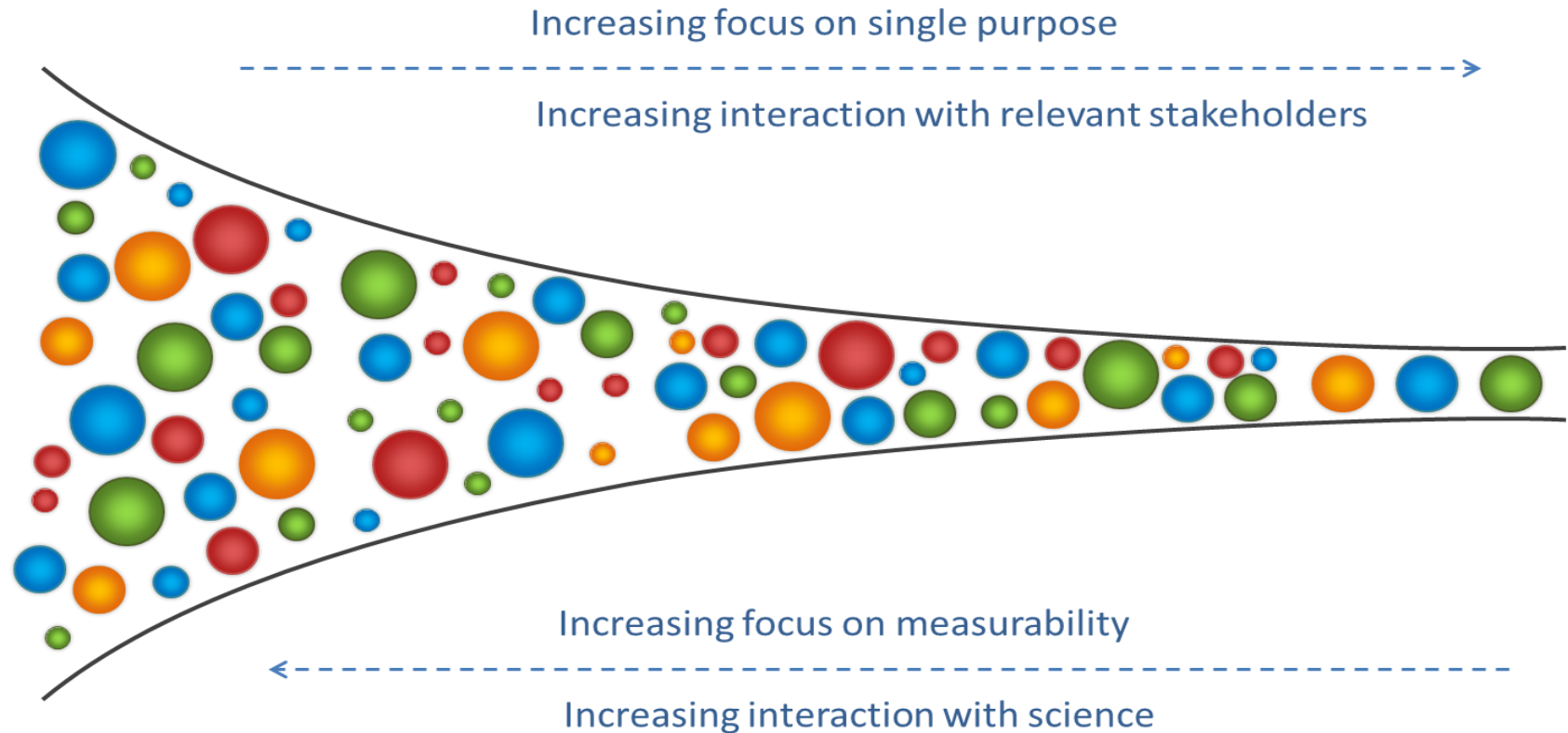
Focus: No-one left behind



"Set of 230 global indicators, ..., a robust framework"

<http://www.un.org/sustainabledevelopment/blog/2016/03/un-statistical-commission-endorses-global-indicator-framework/>

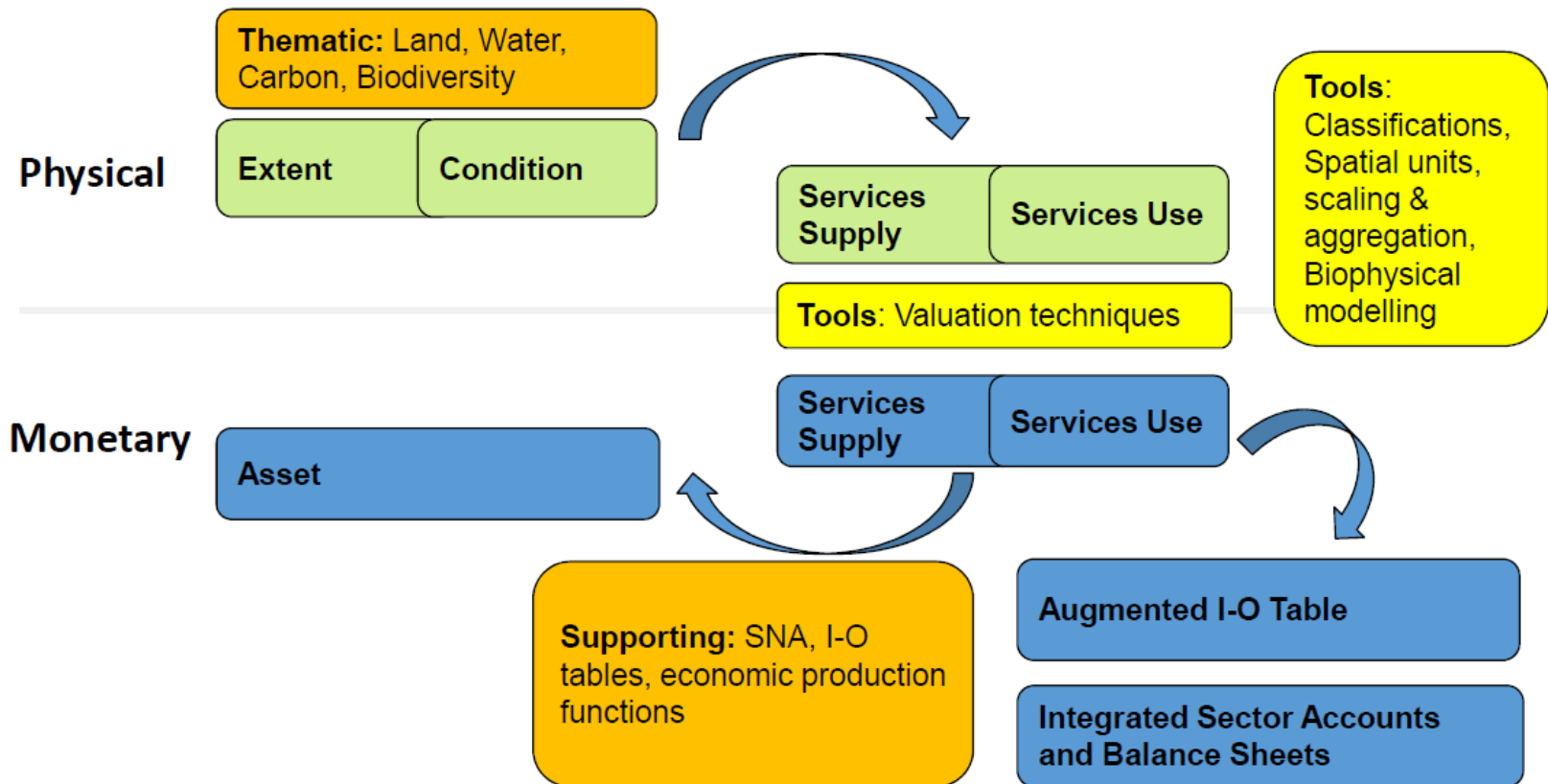
Reduction of complexity



Complementary approaches

- Accounting
 - system of structured tables with a rigorous internal logic
 - process to integrate different data sources to generate a coherent big picture of how the Earth's capital - economic, human, societal, societal and environmental – evolves over time
- Systems
 - "risk", "resilience", "vulnerability" of embedded economic/social/environmental systems; cooperation with insurance experts and actuaries
- Indicators (sets, composites,...)
 - communication and policy oriented tool with genuine statistical methodology

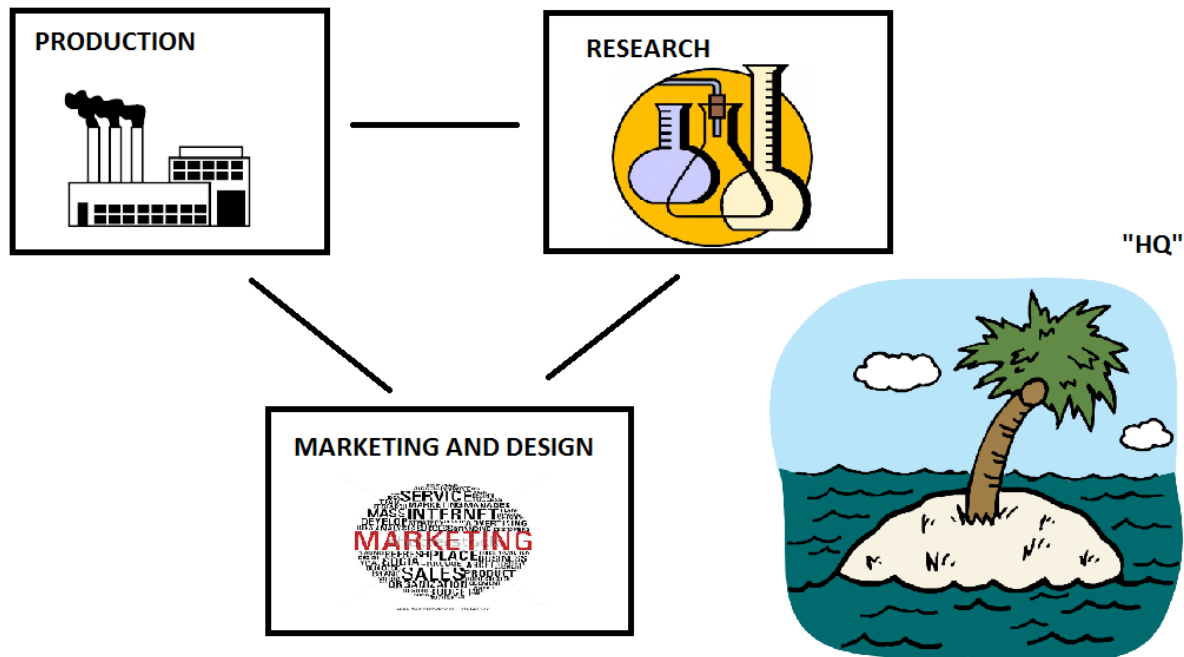
Components of ecosystem accounting



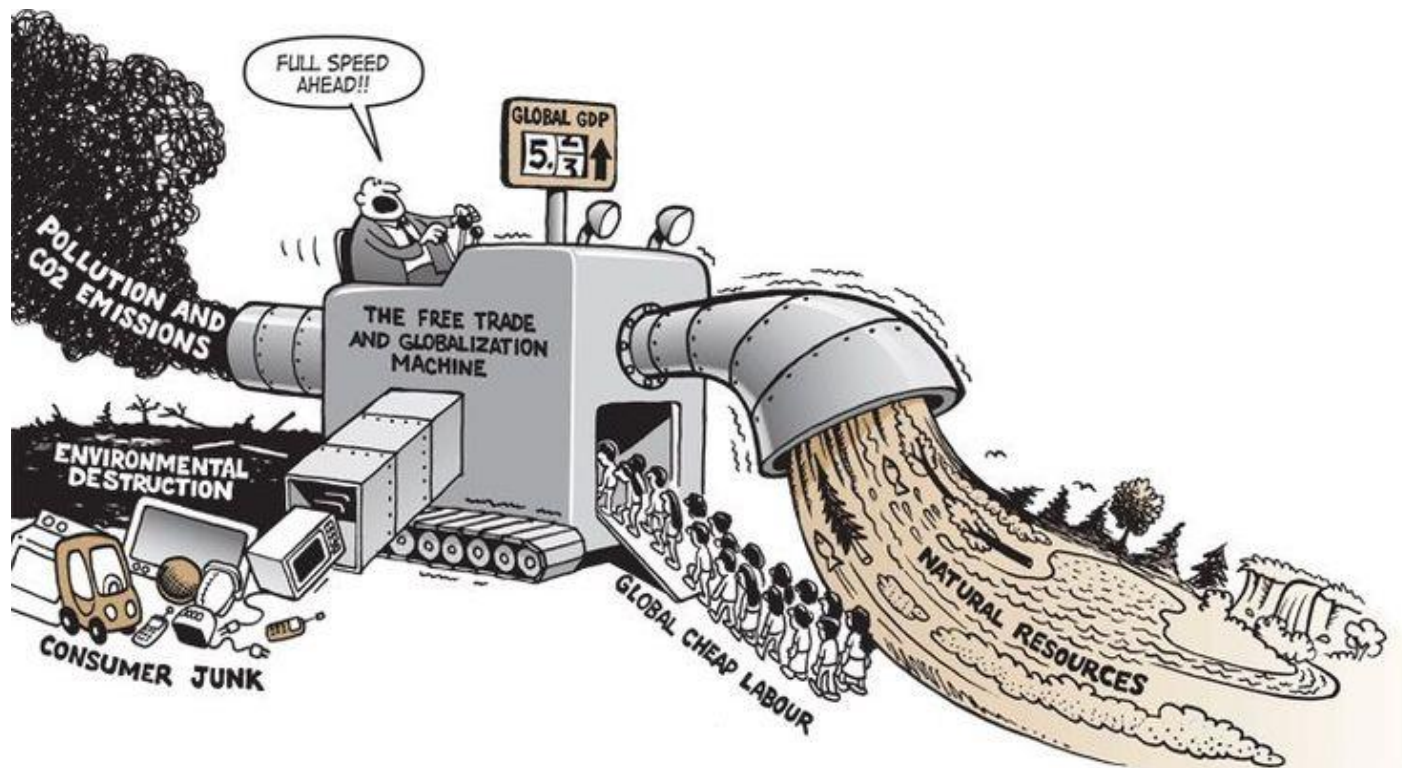
Inequality

- Data revolution
- Traditionally rather separate collections on income, consumption and wealth
- Micro- / Macro Gap
- Cooperation between Statistical Offices, Central Banks and Research
- DGINS 2016 in Vienna (<http://www.dgins2016.at/>)

Globalisation



Putting it all together?



Promoting statistical literacy



http://memespp.com/homer-gdp-meme-generator-gdp-what-is-gdp-ea675c-jpg-1327467092-jpg/assets.diylool.com*hfs*d39*9e2*f7e*resized*homer-gdp-meme-generator-gdp-what-is-gdp-ea675c-jpg1327467092.jpg/diylool.com*memegenerator*homergdp2*memes*gdpwhatisgdp3/

After all: How could we do better?

- *Understand better the 'mutual construction of statistics and society'*
- *Expand research and standard-setting for indicator methodology, both from the statistical and the political science side*
- *Communication of quality profiles (labelling)*
- *Engage stakeholders in the entire construction process*

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THANK YOU