

# The Keynote Session

Lars H. Backer (Chair)

# The EFGS

- The EFGS Network
  - Public Sector producer communities
    - An European professional network of Civil Servants working for the development of National GeoStatistical systems and their integration into future iterations of the ESS
  - Public Sector user communities
    - Communities in the public sector the uses spatial statistics as a foundation for direct or indirect (e.g. through legislation) actions-
- Partners
  - Academia
  - Private sector producer and user communities

## Objective

- A Seamless hierarchy of spatial and time-related Statistics from local to global
  - Global statistical system (GSS)
  - European statistical system (ESS)
  - National statistical system (NSS)
  - Regional statistical system (RSS)
  - .....

## The EFGS pursues this through 3 efforts:

- A vision
  - The formulation of a shared vision for our overriding objective and strive to influence a cluster of projects to reach it. (The UN GGIM and an European equivalent)
- A Project
  - The design and implementation of a series of Geostat projects to prepare for a point-based foundation for the ESS (The EU Geostat projects)
- An Organisation
  - The consolidation of the EFGS as an organisation with a direct or indirect mandate to contribute to the development of the ESS through a taskforce.

# In search of a Vision for the EFGS

Lars H. Backer



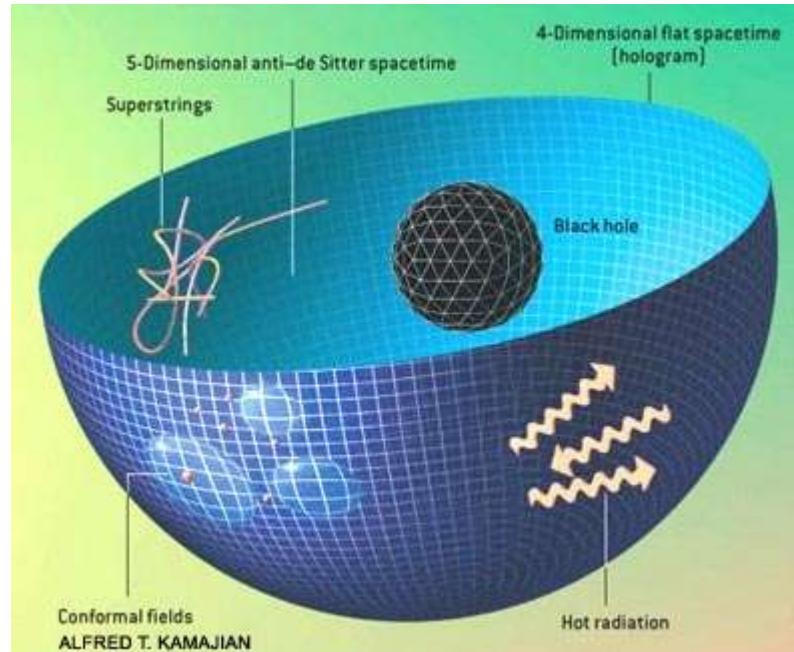
# 1. The Vision

Cultures as Visions





# A Holographic Universe?



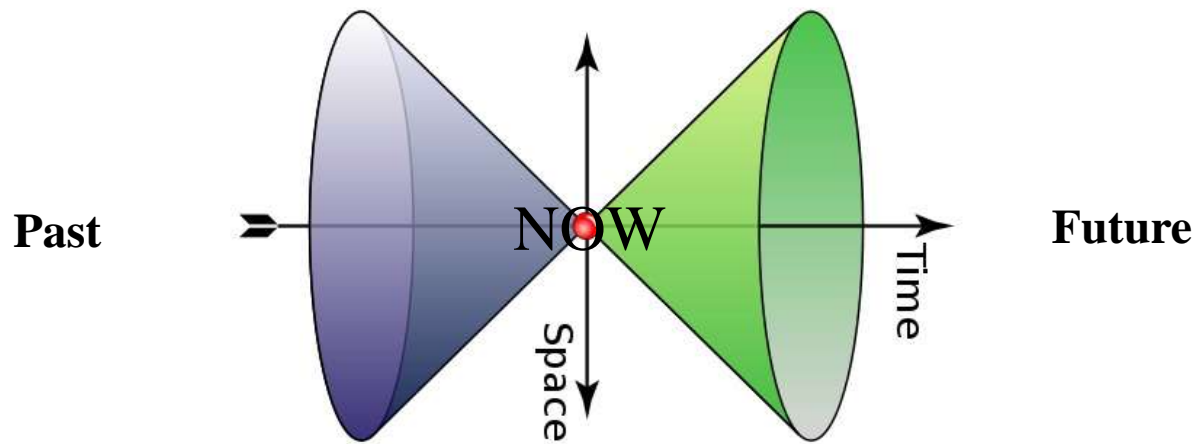
The information to describe the 4d phenomena inside the universe is concentrated on the surface on this universe, on the Entropic horizon.



# Hologram?



# 4D Space - Time



Einstein - Minkowski Space-time

## The Vision as a project

- The Vision of the EFGS must respect the visions for the NSI's and that of Eurostat and their role in the visions for the development of the member states and the European Union .
- We believe that this is not to be found in the programs for political parties or stakeholder groups, but must be sought in more general formulations in our cultural history, in the origins of the ideas accumulated in the history of our arts and sciences.
- This tradition see, as Schopenhauer formulated it in the title of his main work, our world as “Wille und Vorstellung” (Will (to evolve) and representation (model of the world around us)
- All of the member and associated countries share a meta culture that has at its core a meta project.
- We may call this the European Project.

## 2. Will: The European Project

A Society of Guardian and Traders

# The European political project

- The Enlightenment
  - England
    - John Locke, Shaftesbury, Etc.
  - France
    - Voltaire, Daudet, D'Alembert, Olympe de Gouge, Etc.
  - Germany
    - Emanuel Kant, Mendelssohn, Brothers von Humboldt and above all Kant
- Rights (individual rights)
  - The American project
    - Freedom of the individual (Human rights for the middle class?)
    - Declaration of independence, The American revolution (1776)
    - Government by the people, of the people, for the people
  - The French project (Liberté, égalité, fraternité)
    - The French revolution
    - French first republic
- Responsibilities (public responsibility)
  - The German Enlightenment
    - Dialectic between the individual rights and collective responsibilities
    - Democratic government the enlightened state
    - Evolution not revolution.

## Immanuel Kant

“Handle nur nach derjenige maxime durch die du zugleich wollen kannst, dass sie ein allgemeines Gesetz wird!”

“Act only according to the principle that you can accept that it may become a public law..”



“A society of equals, who limit their actions according to Kant-s imperative.”



## The European Project

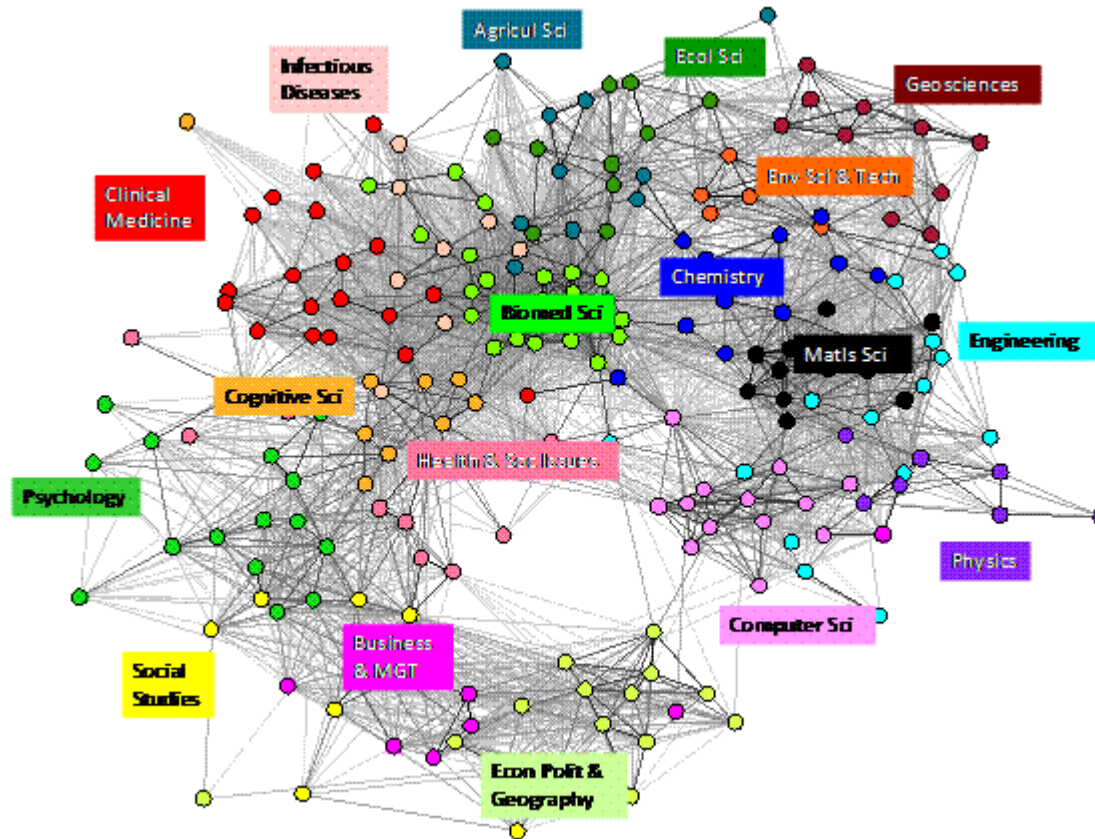
- The European project has the form ABC where A stands for an overall assessment of the current situation in the system discussed, B stands for a vision of a preferred state of the system, and C stands for the “drive” or will to change the situation from A in the direction of B.
- The European project is the result of centuries of efforts to describe and explain the world in which we are living. It is the task of science not only to describe and explain the world but to build operative models needed to control it.
- The European project is also the result of centuries of efforts to design and build societies with a system of government to define the ends, and an economic system to provide the means for development.



### 3. Representation: Information & Knowledge

Real User Needs in terms of information for building systems of knowledge needed to design build and develop complex systems.

Knowledge an integrated system (based on (scientific) ex post perspective) ,  
**but not very practical** (useful for the development of man environmental systems)!



To become useful this information has to be re-structured and reduced to the mere necessities!

## Information & Knowledge

- Knowledge is structured information.
- Qualified knowledge and the use of reason works!
- The most valuable lesson we have learnt over the centuries is that we have realised that there is no better way to achieve expected results for our actions than to argue and implement them with reason and information produced with the scientific method.
- We have learnt how to control and develop systems that process matter and energy with systems of information.
- This is done by transforming systems into Darwin machines governed by human controlled descriptions of the system and the context into which it fits. Such machines can evolve over time.
- This method is used in all developed systems in business and industry as well as for the development of man environmental systems.

## Guardians & Traders

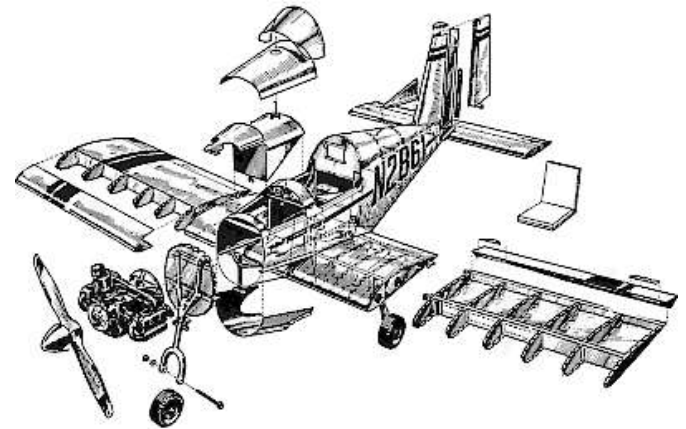
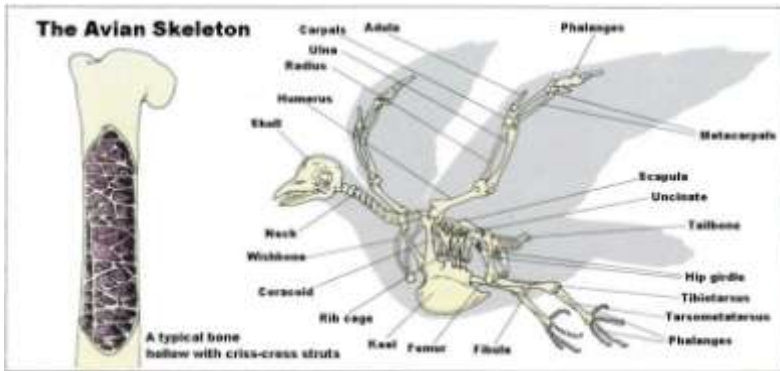
- Two political advisors
  - Politicians are lending their ears to two groups of advisors. The outcome of their struggle will decide what kind of action we take to counter Global threats and exploit opportunities.
- Paradigm A: Consumption (Private rights)
  - “Business as usual”
  - The Financial institutions supported by mainstream Economist
  - Trust market forces to solve all problems in the long run
  - Argue for a culture of further growth
- Paradigm B: Survival (Public responsibility)
  - “Sustainability”
  - Environmental institutions supported by science
  - Warn that paradigm A will lead to severe Global problems
  - Argues for a culture of restraint (zero growth).



## 4. User needs according to Trader communities

The call for a Market for  
Spatial Information

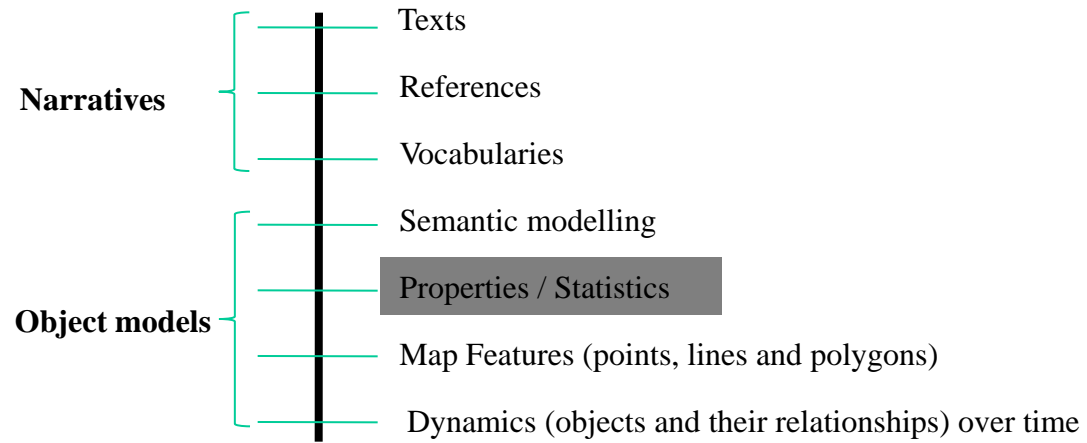




Double perspective : (1) " Interacting wholes" and (2) "Kits of Parts"

# Objects

## Object / layer strategy for data Infrastructure



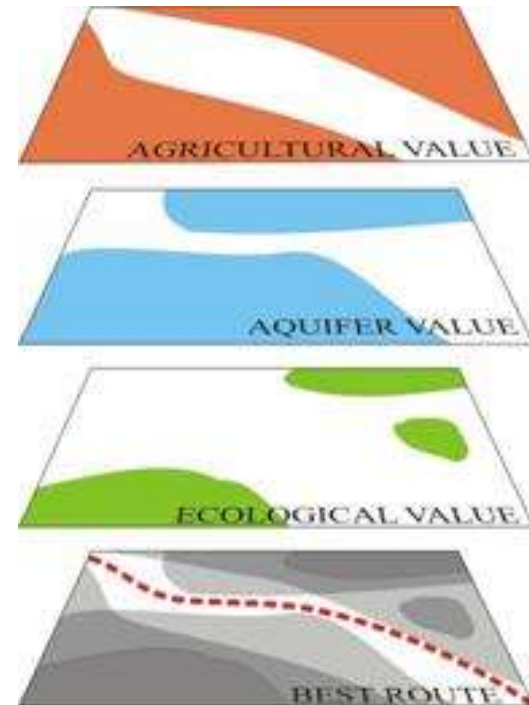
# Organised according to the Layer method



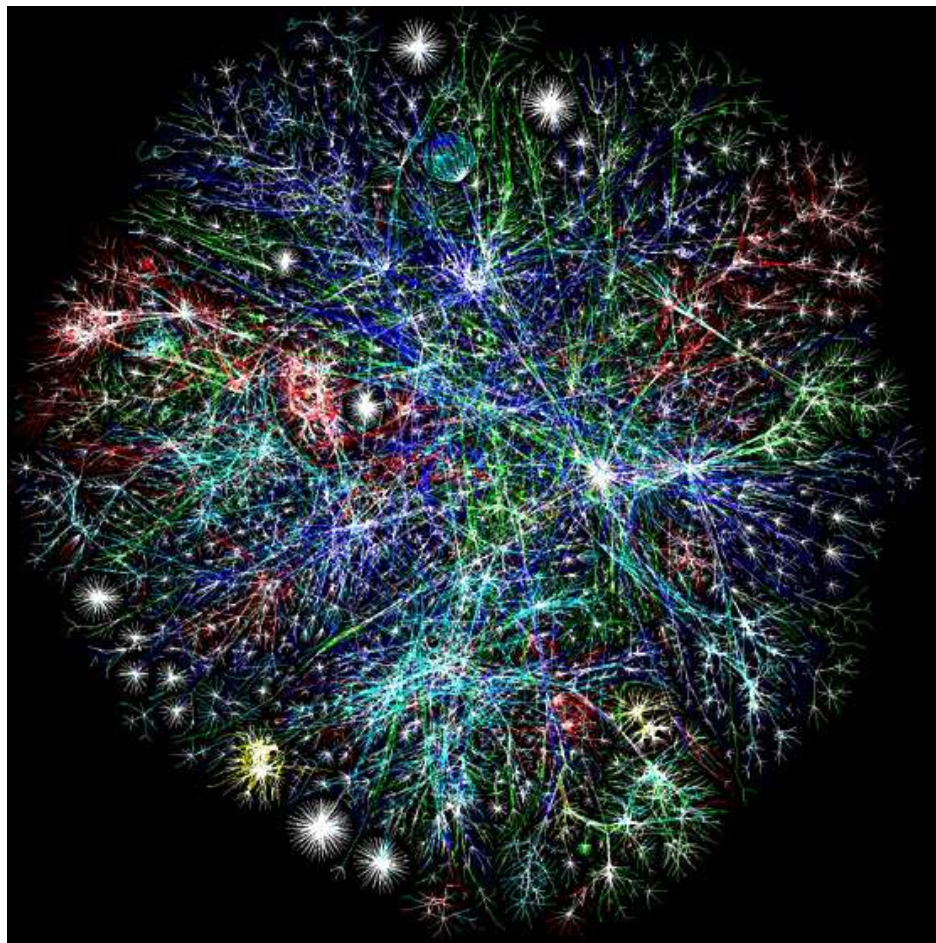
## RE-IMAGINING CITIES URBAN DESIGN AFTER THE AGE OF OIL

AN INTERNATIONAL SYMPOSIUM  
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THE ROCKEFELLER FOUNDATION PENN STATE UNIVERSITY - URBAN INSTITUTE PennDesign



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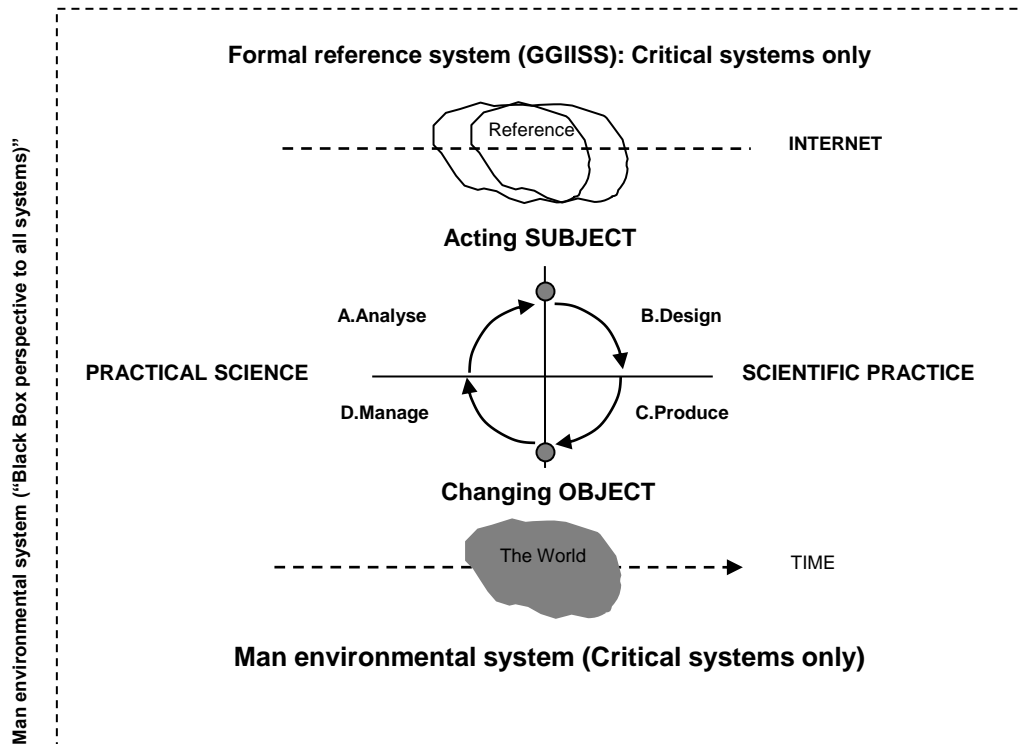




# The Information Supermarket



”If you cannot describe it you cannot manage it!”





## “Trader” communities and information needs

- Economics and the trader cultures and communities is not based on science. Economics is a practical discipline. Its models are based on assumptions like the “homo economicus” and “markets”.
- In its classical form, its proponents have argued that man environmental systems are self regulating and need no control functions. The best strategy for development according to this method is to establish a functioning market and a system for its management. The rest will take care of itself.
- This idea has been challenged as being “radical”, un- dialectical, un- ethical and poses a serious threat to the prospects for future generations. It is not sustainable.



## 5. User needs according to Guardian communities

The Call for a structured system of  
spatial Information (Knowledge)

# Scope

- **The Ecological method (an example):**
- **A project for the develop the Man-made environment.**
  1. Will focus on the task at hand that is to improve mainly physical man-made structures.
  2. Will have to consider (seriously) the impact of (and the consequences for) on the broader context ( the natural environment, the economic system, and the socio-cultural system.)
- **Focus:**
- **BE: Man-made environment**
  - Layer ((maps &statistics) theme 1)
  - Layer ((maps &statistics) theme 2)
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- **Context:**
- **NE: Natural environment**
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# Scale

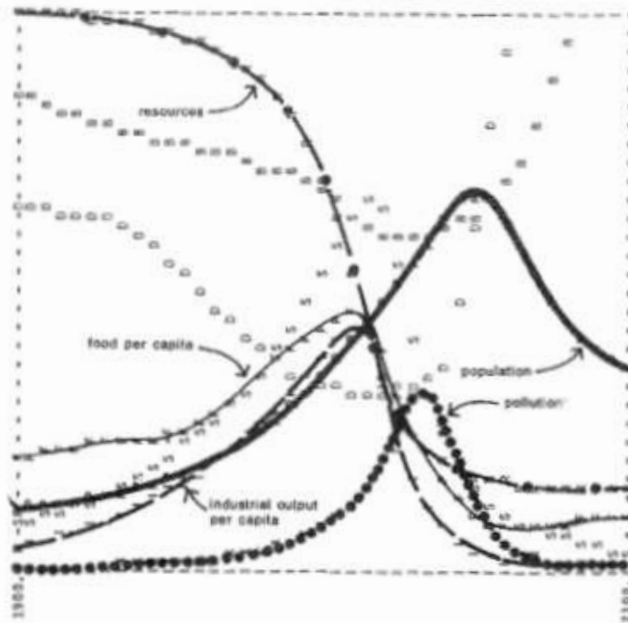
(power of ten scale intervals)

6	1 000km	10 000km	Earth	To design and develop the Earth	
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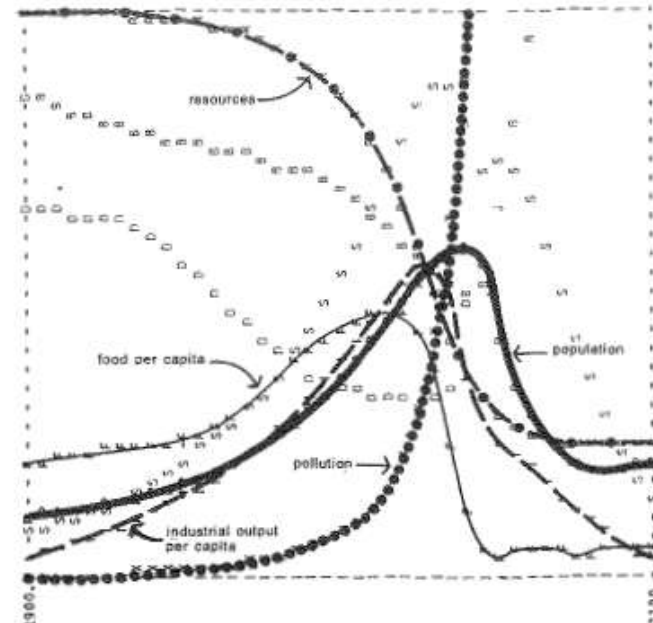
# Time

Figure 35 WORLD MODEL STANDARD RUN



The "standard" world model run assumes no major change in the physical, economic, or social relationships that have historically governed the development of the world system. All variables plotted here follow historical values from 1900 to 1970. Food, industrial output, and population grow exponentially until the rapidly diminishing resource base forces a slowdown in industrial growth. Because of natural delays in the system, both population and pollution continue to increase for some time after the peak of industrialization. Population growth is finally halted by a rise in the death rate due to decreased food and medical services.

Figure 36 WORLD MODEL WITH NATURAL RESOURCE RESERVES DOUBLED



To test the model assumption about available resources, we doubled the resource reserves in 1900, keeping all other assumptions identical to those in the standard run. Now industrialization can reach a higher level since resources are not so quickly depleted. The larger industrial plant releases pollution at such a rate, however, that the environmental pollution absorption mechanisms become saturated. Pollution rises very rapidly, causing an immediate increase in the death rate and a decline in food production. At the end of the run resources are severely depleted in spite of the doubled amount initially available.

## “Guardian” communities and information needs

- According to the European Project all public debate and actions should be based on reason and qualified information produced with the scientific method.
- With the growing awareness for the interdependence between the different parts of a world interpreted as a hierarchical systems and subsystems we need a hierarchical system of harmonised descriptions of whole man environmental systems.
- A system like that cannot emerge from a “market” that does not believe in the need for control and management of information in the “public” interest.
- Qualified systems of information has to be deliberately designed and developed based on previous experience from government efforts to develop localities, cities, regions and whole countries according to the ecological method.



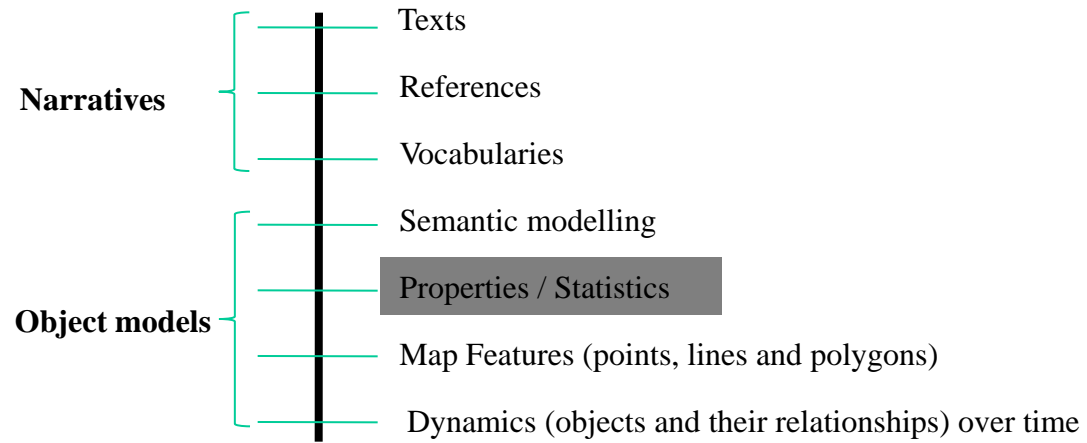


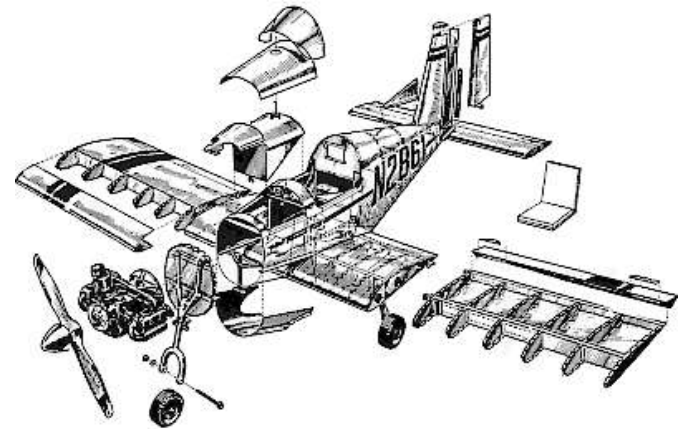
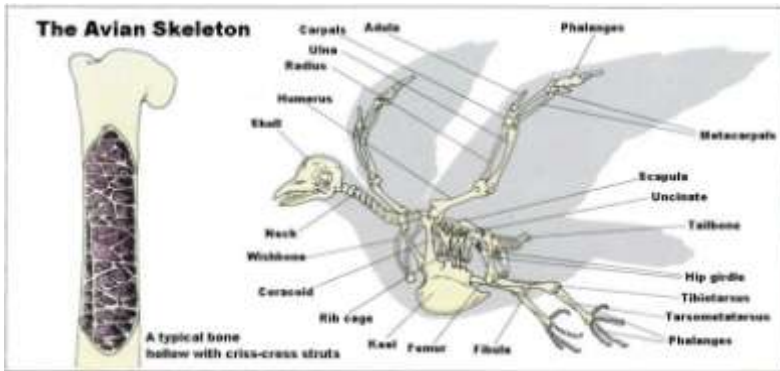
## 6. The Vision of a structured market for Spatial Information

A next iteration for the INSPIRE and the GGI  
projects

# Objects

## Object / layer strategy for data Infrastructure





Double perspective : (1) " Interacting wholes" and (2) "Kits of Parts"

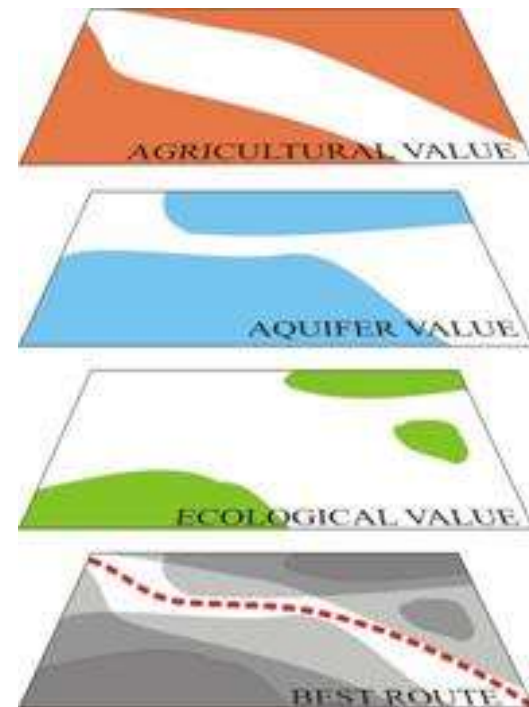
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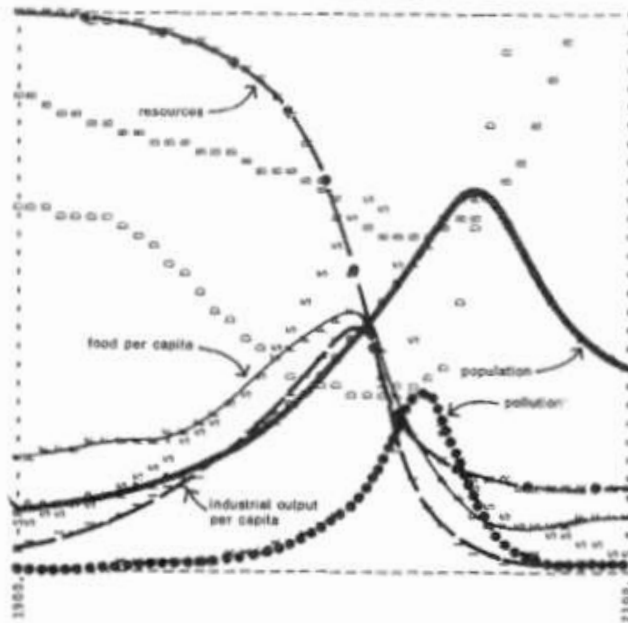
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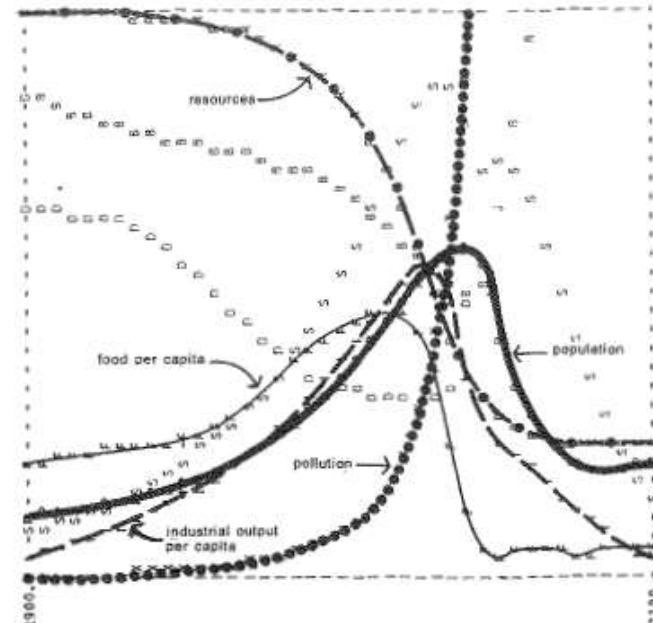
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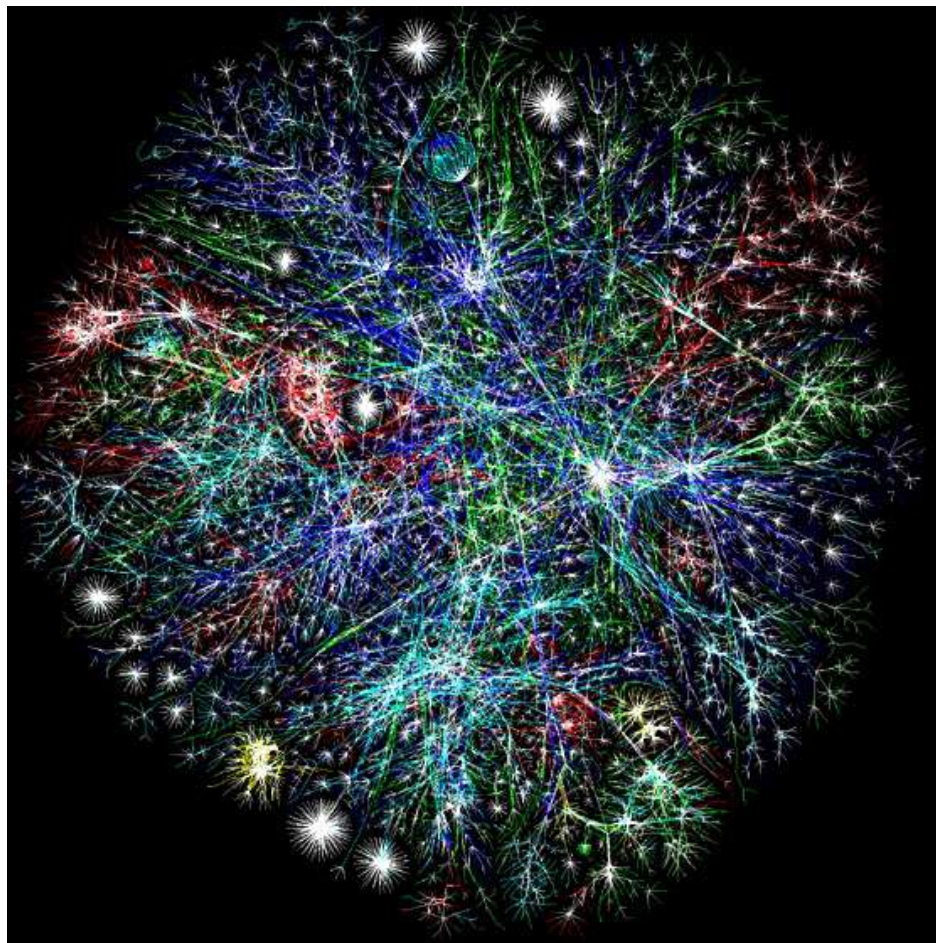
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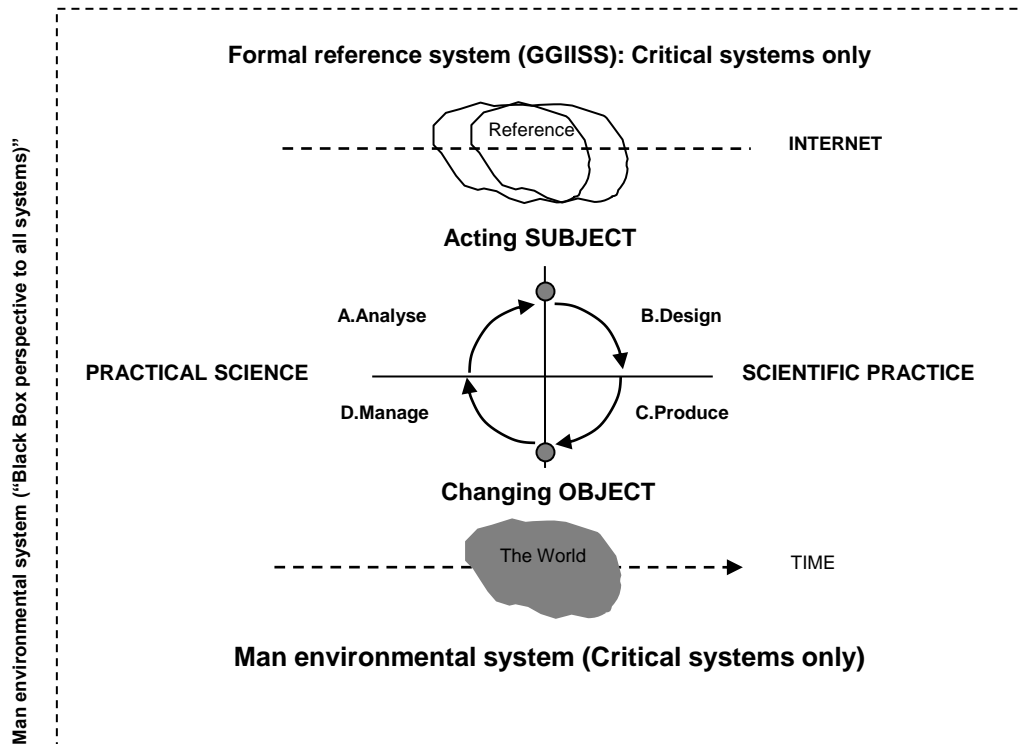




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## The INSPIRE and the UN GGIM

- We believe that it is essential to have a debate on the vision for a European EGIM (European system for Geo- Information Management) and Global GGIM (Global system for Geo- Information Management).
- The building of an SDI for the enabling and management of a Market for spatial information is not good enough. It may satisfy private sector needs but not those of the public sector.
- We call for a second round for the discussions of the concepts (both in terms of technology and contents) leading to the current first version of INSPIRE.
- One of the most pressing issues in addition to a shared structure for this modelling effort, is to provide for a proper integration of geography and statistics.



## 7. A short version

How about:

**“The EFGS promotes Statistics  
for modelling  
Man Environmental Systems”**

Thank You!

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