

A scenic view of a beach with waves crashing onto the shore under a cloudy sky. The text is overlaid on the image.

***GEOSS User Needs and System Performance
Utility
(UNSPU): First Experiences and Status***

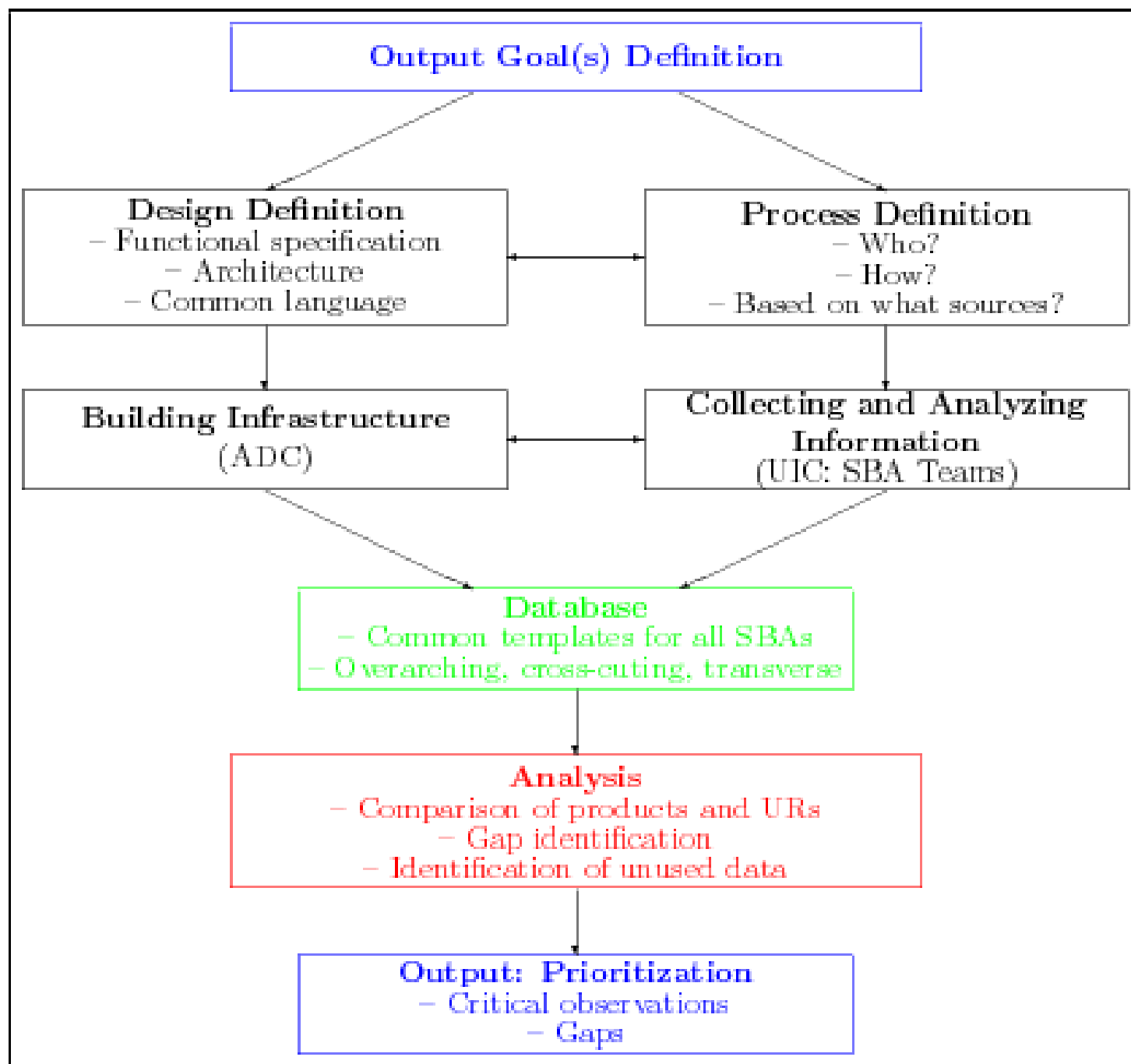
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GEOSS User Needs and System Performance Utility (UNSPU): First Experiences and Status

- Overview of the Process
- Functional Specifications
- Architecture of the UNSPU: Modifications
- First Experiences: The Air-Quality Case

Overview of the Process



*Goal: User
Requirements in
Support of
System Design*

Functional Specifications (1)

The UNSPU shall have the following **database components**:

Earth-system related:

- **Objects/parameters: registry of objects/parameters (variables, properties, states, trends, *Information pieces*);**

User-related:

- **Users: registry of GEOSS users groups and classes;**
- **Applications: applications benefiting from Earth observations and derived Products;**
- **Requirements: quantitative requirements in terms of objects;**

Observing System-related:

- **Specifications: specifications of system performance in terms of products and their characteristics;**
- **Techniques: observation techniques, including observed variables, accuracy, resolution, latency, reliability, availability, and status (research, operational);**
- **Observation: observations available to GEOSS;**
- **Products: products (may include observations) made available through GEOSS services, including a quantitative characterization.**

Functional Specifications (2)

Original proposal:

The UNSPU shall provide the following **Links**:

- LINK AU: Users to applications and applications to users;
- LINK RA: Applications to requirements and requirements to applications;
- LINK PO: Observations to products and products to observations.

Modification: Only one LINK table

Functional Specifications (3)

The UNSPU shall provide the following **edit functions for GEO members**:

- Users;
- Applications;
- Techniques.
- Observations;
- Products.

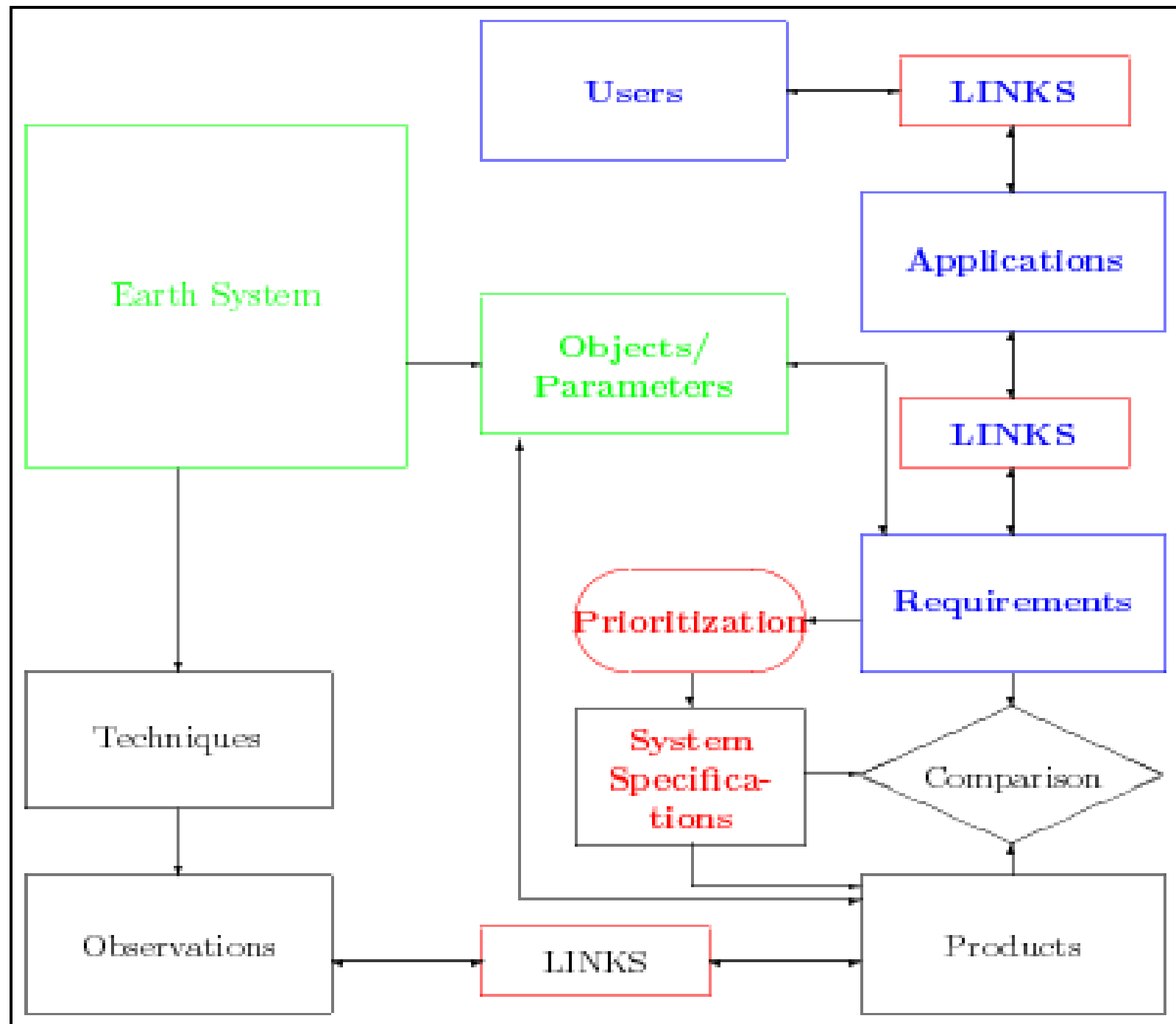
The UNSPU shall provide for **authorized administrators edit functions** for the following components:

- **Objects**;
- Requirements;
- Specifications.

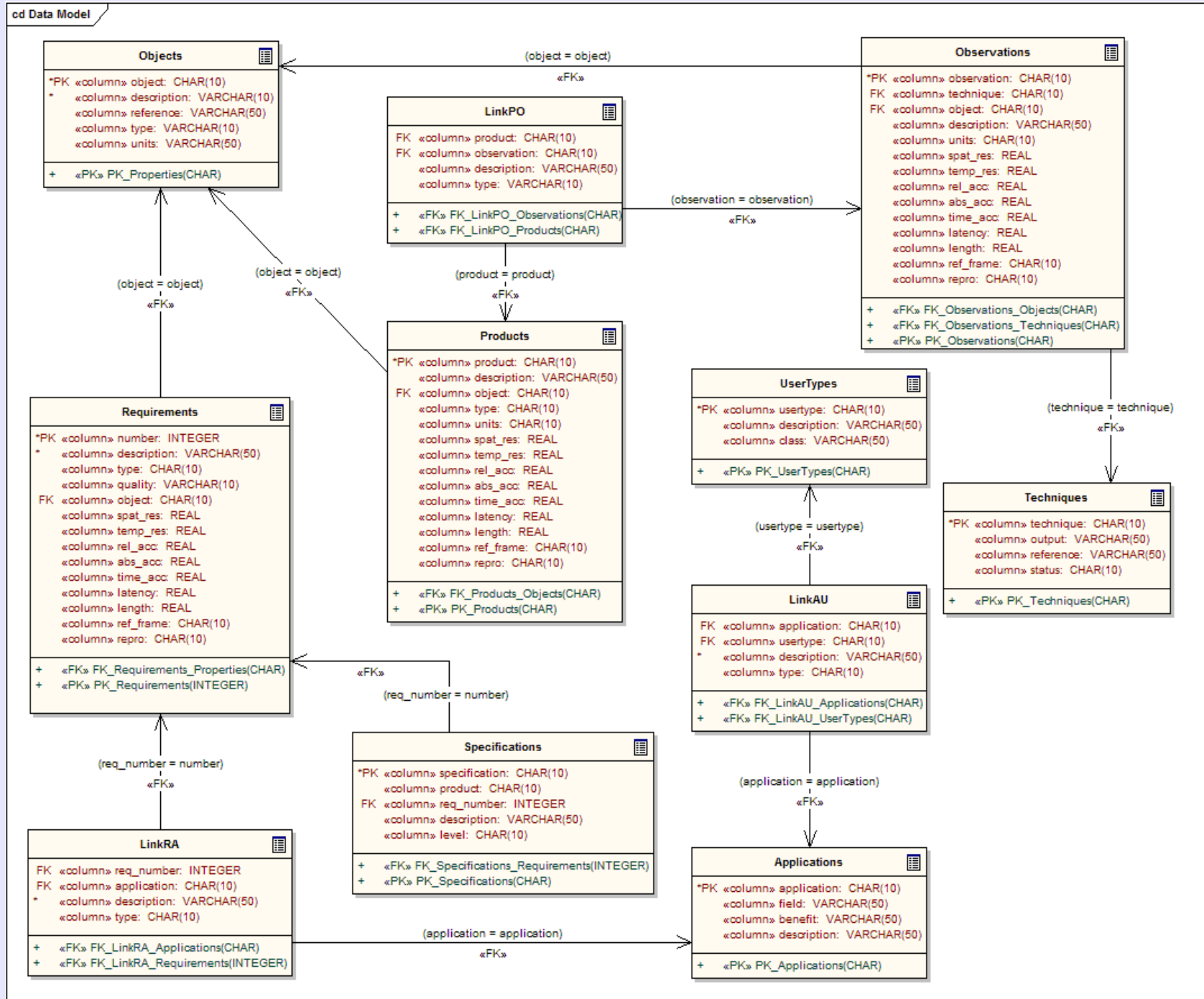
The UNSPU shall provide the following **analysis functions**:

- Deviations of products from specifications (performance);
- Applications not being severed as needed (gaps analysis);
- Users not getting the full benefit of Earth observations (gap analysis);.
- Observations and products not used (redundancy);

Architecture



Architecture



Architecture

Implementation:

- Doug Nebert and others are working on implementation of the table;
- First test case: Air Quality Workshop, Monday, May 4, 2008;
- Web interface was not available;
- User-related tables were available as Word docs.

Populating and Updating the UNSPU

Consider the User-related Part of UNSPU:

- *Harvesting from existing databases (WMO, NASA, NOAA, ...)*
- *GEO UIC: Ad hoc SBA Teams (Lawrence Friedl et al.). **Broadly user-driven?***
- *GEO STC: Considering the need for comprehensive monitoring, the spatial and temporal characteristics of the quantities determine the necessary monitoring system. **Specific user group driven, science-based.***
- *GEO ADC: Looking from GEOSS to the user needs in the SBAs. **Provider-drive?***
- *GEO CoPs: Bring together a lot of specific expertise and understanding of the observational needs: **Good test case: Air Quality !***

Goal should be a Transition:
Provider-Active to Customer-Active
Offer-Based to Demand-Based

First Test Case: Air Quality

Experience:

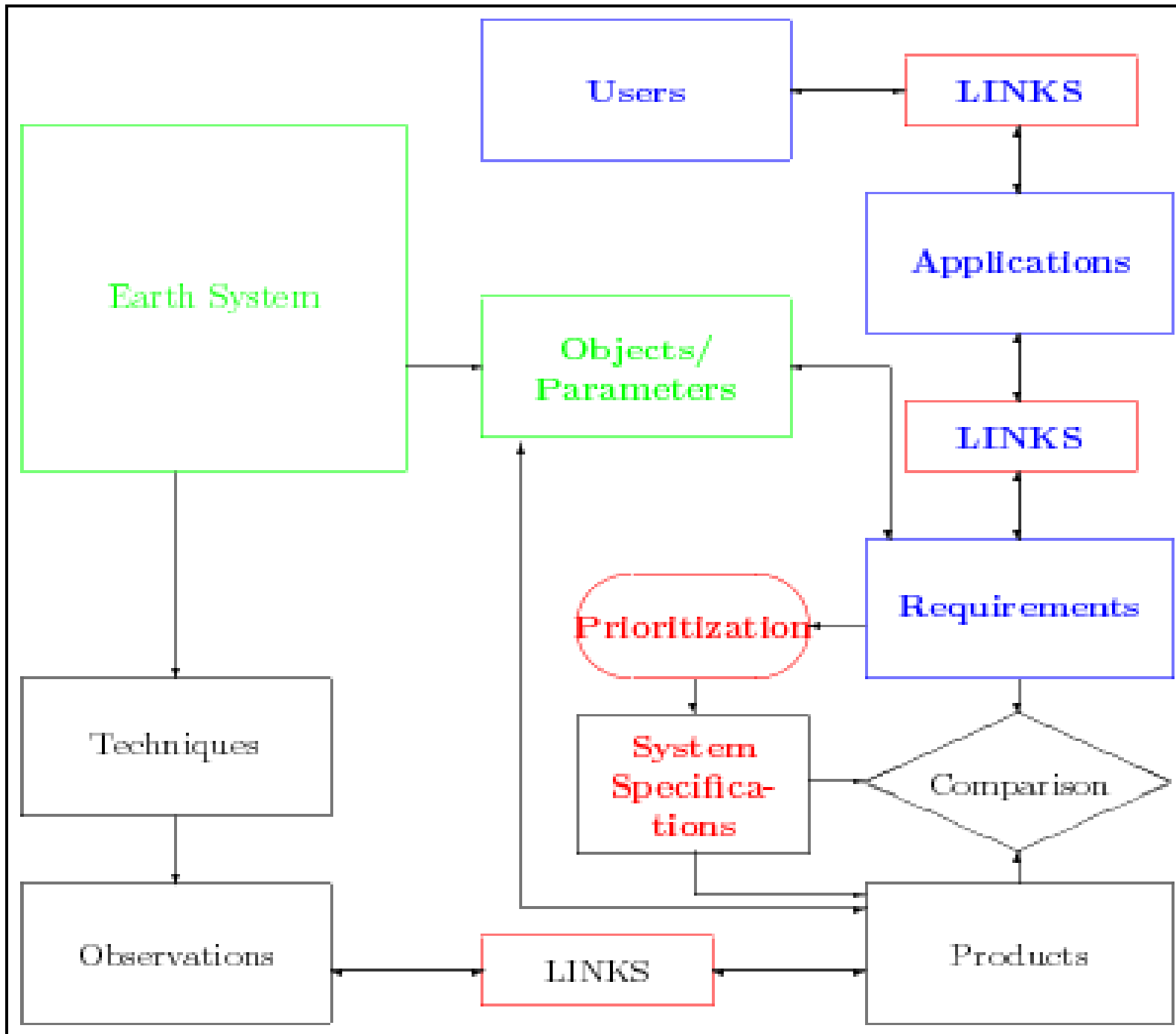
- Many principle discussions;
- Difficulties to break down value chain into elements;
- Need to emphasize that table entries are a language to describe relations;
- Flexibility, flexibility, flexibility ...

Break down of example chains between GEOSS and End User:

- Individual decides whether or not to run;
- Gets Air-Quality information from TV, Web or radio;
- Gets information by phone, or fax from weatherman;
- Weather office turns observations into information concerning air quality;
- Weather office gets data from GEOSS

Small group will work on examples over the next days ...

First Test Case: Air Quality



*Flexibility:
Only one
LINKS table*