



*C4 Meeting, Geneva
June 17-18, 2008*

**The GEO User Requirements
Approach to Achieving Societal
Benefits**

*Report of the UIC Meeting
Toronto, May 6-8, 2008*

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UIC Meeting, Toronto, May 6-8, 2008

- Co-Hosted by the IEEE Committee on Earth Observations (Ellsworth LeDrew), and the Canadian Committee on Earth Observations (Kenneth Korporal)
- Attendees: Austria, Canada, Czech Republic, EU, Japan, Germany, Kenya, Norway, Russia, Spain, US, ECWWMF, ESIP, GGOS, IEEE, IGOS-P, and ISPRS



New Approach to UIC Meetings

- Prior to the 8/07 Washington meeting, emphasis was to develop the WorkPlan tasks and 'Communities of Practice' that would encompass a range of user's interests and address the SBAs. Meetings were focused on launching new CoPs and ongoing reporting of progress. Over time, there was some dissatisfaction expressed with the rate of progress and the organizational structure of the meetings.
- Consequently, at the Washington meeting more time was provided for the UIC deliberations and the CoP's were organized into theme groups held as concurrent sessions. Summary reports were delivered to the plenary. This allowed more time for discussion of progress and achievements as well as plans for future development. This shift in approach was well received.
- In Toronto, the second day was comprised of concurrent sessions with stated objectives and plenary assessments. Joint sessions on days one and three were devoted to significant issues of interest to all participants.

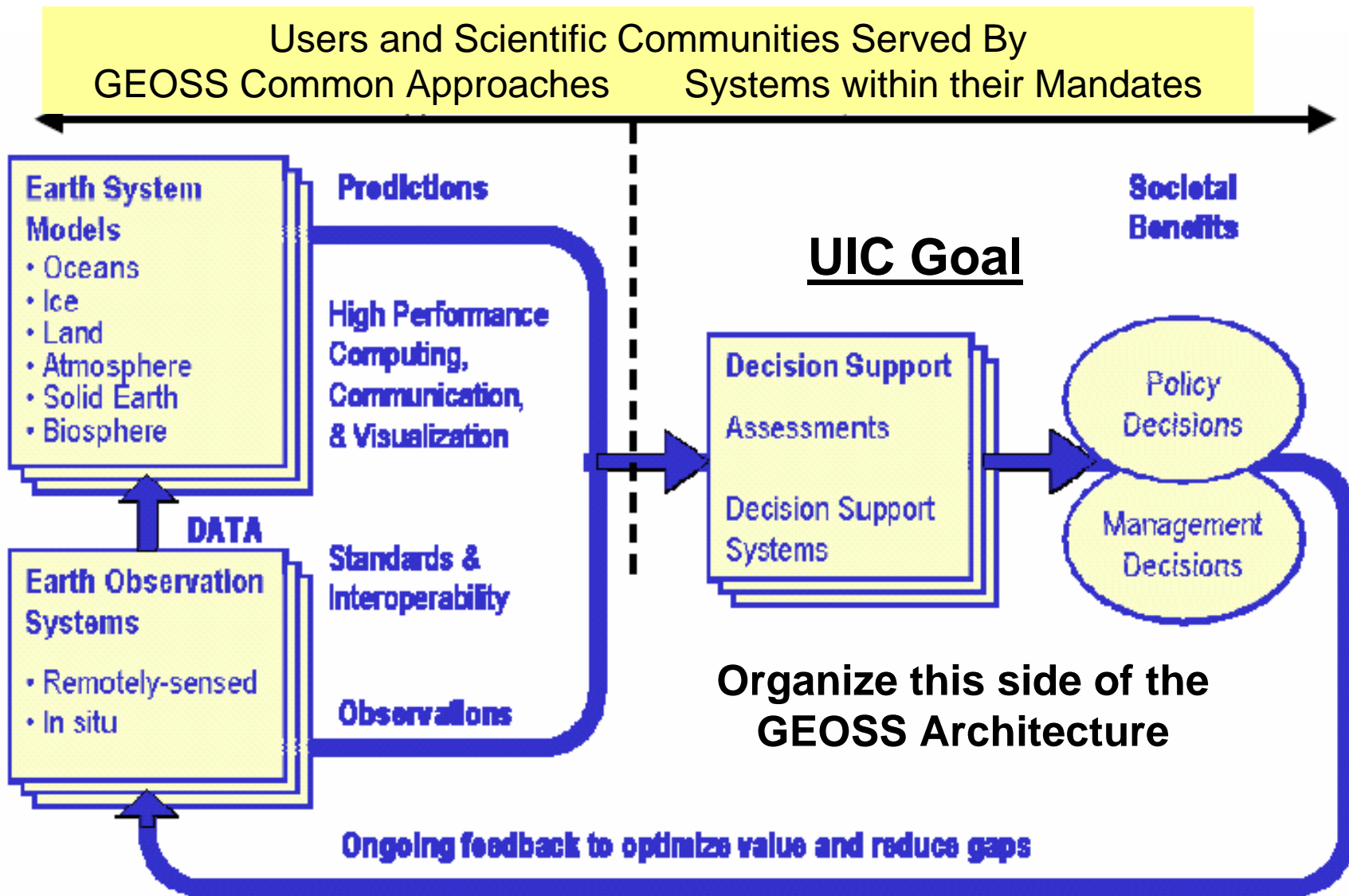


Outcomes of the Seventh UIC Meeting

- Reaffirm our goal to “•To engage users in the development and implementation of a sustained GEOSS that provides the data and information required within and among the nine societal benefit areas as specified by user groups on national, regional and global scales”.
- The Major UIC Work Plan task, US-06-01, is proceeding on two fronts under the leadership of Dr. Lawrence Friedl and Dr. Hans-Peter Plag. Status reports were presented by each.



The GEOSS Architecture





GEO TASK US-06-01

Establish a GEO process for identifying critical Earth observation priorities common to many GEOSS societal benefit areas, involving scientific and technical experts, taking account of socio-economic factors, and building on the results of existing systems' requirements development processes.



Lawrence Fried-Gathering URs

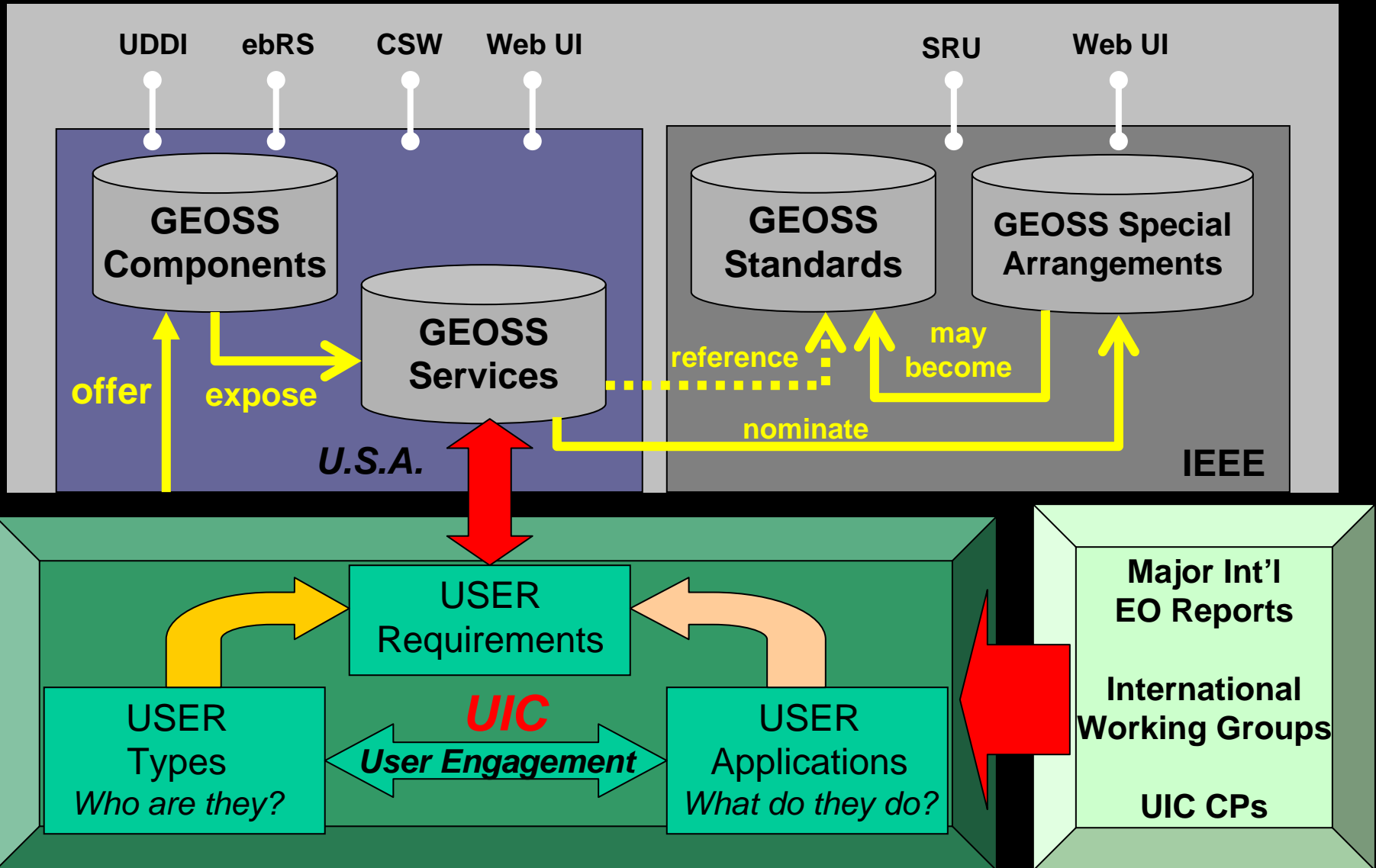
- The “Gathering of User Requirements” is being done by consultants acting as ‘Analysts’ for the SBAs, drawing upon SBA ‘Advisory Groups’ drawn from UIC members and GEO specialists.
- The Canadian Forest Service, IGOS-P and US EPA have provided Analysts and NASA is contracting for the rest. The GEO Secretariat’s contractors will be assisting the SBA Advisory Groups. More volunteers are needed for the Advisory Groups



Plag & Nebert – UR Databases

- Benefited from the ADC-UIC work of the Architecture Implementation Pilot (AIP) Air Quality Scenario Workshop held the day before the UIC meeting in Toronto. Developments from this workshop are helping modify the US-06-01 database structure.
- Next figure shows the databases as part of the GEO Architecture.

GEOSS Registries





C4 Perspective – Gathering of URs

Harvesting from existing documents and databases

- GEO UIC: *Ad hoc* SBA Analyst Teams (Lawrence Friedl et al.).
Broadly user-driven?
- GEO CBC: Join the SBA Analyst Teams; Ensure representation of developing Countries. *User-driven, capacity building requirements.*
- GEO STC: Considering the need for comprehensive monitoring, the spatial and temporal characteristics of the observation quantities and determine the necessary monitoring system. *Specific user group driven, science-based.*
- GEO ADC: Looking from GEOSS to the user needs in the SBAs.
Provider-driven requirements (portal and clearinghouse)?
- GEO CoPs: Bring together a lot of specific expertise and understanding of the observational needs: *Good test case: Air Quality !*

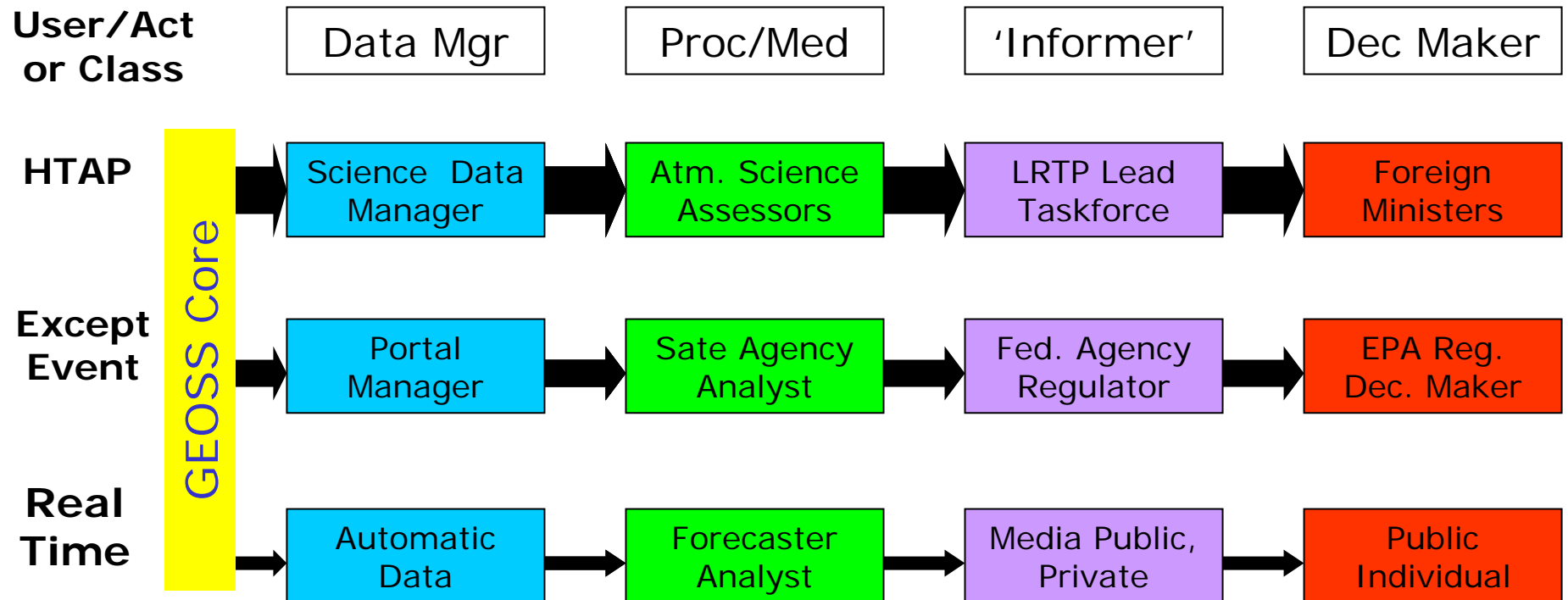
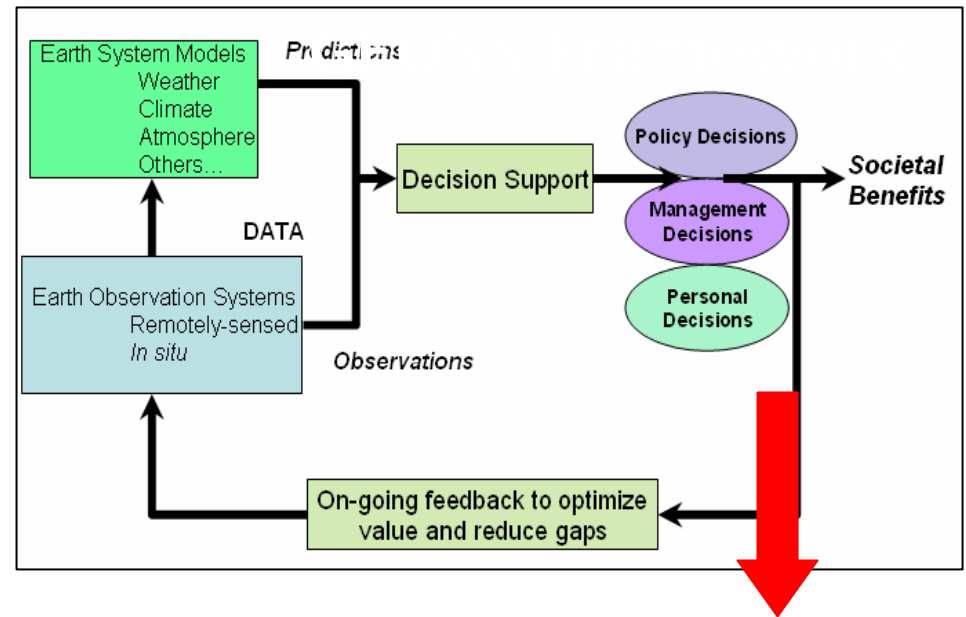
Goal should be a Transition:
Provider-Active to Customer-Active
Offer-Based to Demand-Based

Air Quality Info System

Users (Classes)

Links (Types)

Info (Flow)





UIC Objective –Engage Users

- Enable GEO to address in a systematic, targeted, focused and comprehensive way the needs and concerns of **a broad range of user communities** in developing and developed countries, across issues and trans-disciplinary needs, with a particular focus on fostering new or less organized communities.
- Enable GEO, in the implementation of GEOSS, to **engage a continuum of users**, from producers to the final beneficiaries of the data and information
- NEW – A Potential UIC “call for participation”



Potential UIC

"call for participation"

Suggestions for three project types:

1. New projects that engage, or needed by, or identified by, developing countries
2. Existing projects needing help identifying, accessing, and applying Earth observations
3. Existing or completed projects wanting an international forum to present their applications

These are for user engagements on application-type projects, which also can provide UIC some insights on user requirements. This requires coordination with CBC, STC and ADC.



Potential UIC

"call for participation"

Recommendations:

- Provide international applications workshops that will bring together individuals who will be doing the projects and experts who can help facilitate the work
 - Possibly co-sponsored by ISPRS and IEEE
- UIC will need to play a brokering role between user communities and GEOSS resources



THE SPECTRUM OF USERS

From observations

Earth observations & earth system models

Data-to-Information archiving & services

Decision support tool development

Decision making

Assessment of benefits

To societal benefits

Requirements well known

Earth system scientists and modelers

Earth system service providers

Environmental process modelers & researchers

Policy Makers & Environmental managers

Public officials, advocacy groups and the Public

Not aware that observational Requirements are even needed



Three concurrent UIC sessions were held to focus on the CoPs

For Day Two three concurrent sessions were held

- Air Quality and Health Community of Practice (Rudy Husar) (Session 1)
- Biodiversity Community of Practice (Douglas Muchoney) (Session 3)
- Biodiversity and Human Health (Gary Foley) (Session 3)
- Coastal Ecosystems Community of Practice (H-P Plag) (Session 2)
- Energy Community of Practice (Ellsworth LeDrew) (Session 3)
- Forest Community of Practice (Michael Brady) (Session 3)
- Geohazard Community of Practice (Guy Seguin) (Session 3)
- Global Geodetic Obs. System (GGOS) (H-P Plag) (Session 2)
- Water Cycle Community of Practice (Rick Lawford) (Session 2)
- Water and Health Community of Practice (Gary Foley) (Session 2)

Plenary summations were provided.

Issues focused on the identification of new CoP's, potential for merging CoP's, IGOS-P Involvement, and Modifications to and new ideas for the next phase of the GEO work plan.



Communities of Practice

A user-led community of stakeholders, from providers to the final beneficiaries of Earth observation data and information, with a common interest in specific aspects of societal benefits to be realized by GEOSS implementation.

The Communities of Practice will be self organized and will include stakeholders required to achieve benefits.

UPCOMING – Using CoPs and IGOS-P Theme Teams to increase activity in the GEO WorkPlan09-11 End-to-End Tasks



Overall UIC approach

Encourage, coordinate & integrate the work of

- **The Communities of Practice**
- **IGOS-P Theme Teams**
- **CEOS Virtual Constellation user needs**
- **The new GEO End-to-End Workplan Tasks**
- **SBA-focused Early Achievements**
- **User groups, e.g. GNU(GMES) & GEONETCast**

Work in the C4 to bring integrate the work of the Committees to effectively develop GEOSS & ensure that Societal Benefits will occur.



What's Next for UIC

- Seven IGOS-P Themes and two CEOS VCs participated in UIC Washington Meeting, Aug 07
- Four IGOS-P Themes at UIC Toronto Mtg, May 08
- **Next UIC meeting in Boulder, Colorado, September 22-24, 2008, Co-located with ADC and C4 meetings**
 - **Goal: Maximize attendance of CoPs, IGOS-P Themes, CEOS VCs & other User Groups**
 - **Goal: Determine UIC & Member roles in new GEO End-to-End SBA Workplan Tasks--via Break-outs**
 - **Goal: Propose Next UIC Steps for GEO Workplan coordination with other Committees**



The GEOSS Architecture

Users and Scientific Communities Served By
GEOSS Common Approaches Systems within their Mandates

