



# **GEOSS**

## **Architecture Implementation Pilot (AIP)**

### **Task AR-09-01b**

George Percivall,  
Open Geospatial Consortium  
GEO Task AR-09-01b Task POC  
March 2010

[www.ogcnetwork.net/AIP](http://www.ogcnetwork.net/AIP)





## Architecture Implementation Pilot

- Develop and pilot new process and infrastructure components for the GCI and the broader GEOSS architecture
- Previous phases of AIP contributed to development of GCI and the application to SBA Scenarios
- AIP-3 beginning now
  - [www.earthobservations.org/geoss\\_call\\_aip.shtml](http://www.earthobservations.org/geoss_call_aip.shtml)



## AIP-2 Achievements

- Community of Practice Scenarios deployed through collaboration with SBA Tasks
- Reusable Process for applying scenarios on Service oriented Architecture – GEOSS SoA
- Contribution/registration of persistent services using GEOSS Interoperability Arrangements
- Reports/videos: [www.ogcnetwork.net/AIP2ERs](http://www.ogcnetwork.net/AIP2ERs)

AIP-2 Call for Participation	June 2008
Demonstrations to GEO Committees	May 2009
Reports Completed	September 2009



## AIP-3 Builds on AIP-2

- Build on GCI and Community Services
  - Promote mash-ups in a "link-rich" environment
- Engage additional Communities of Practice (CoP)
- Focus on Data; Promote Content
- Results in time to support EO Summit

AIP-3 Call for Participation	January 2010
Kickoff Workshop	March 2010
Contributions to EO Summit	August 2010
All Deliverables Completed	2010

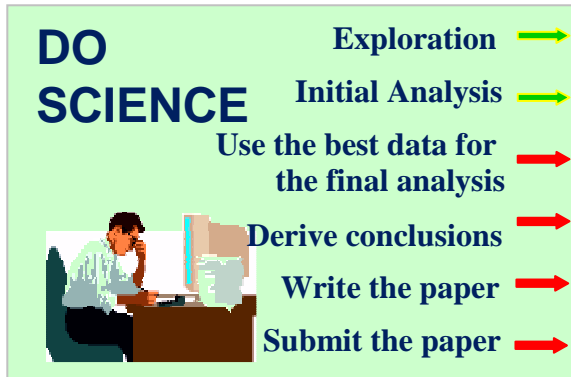
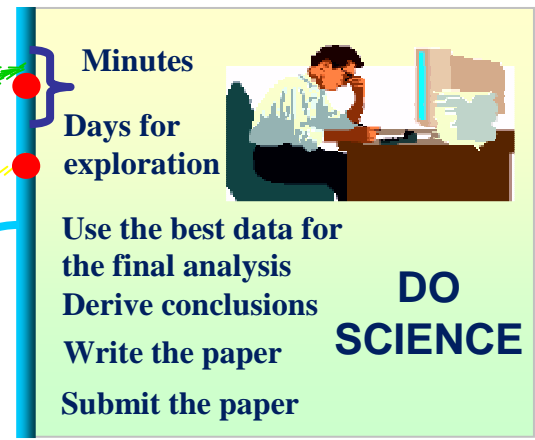
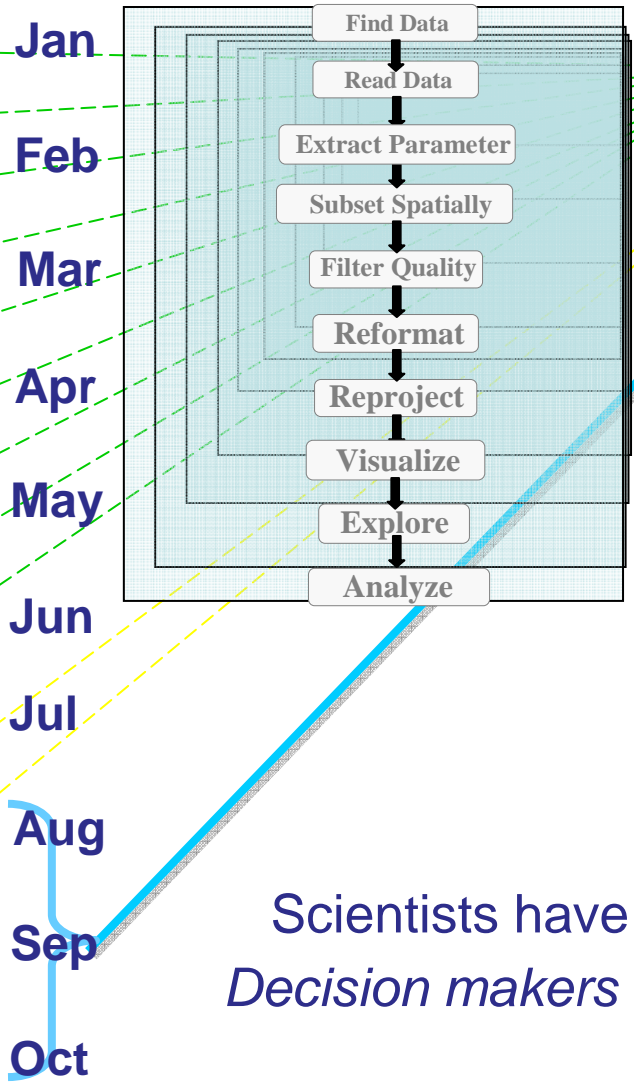
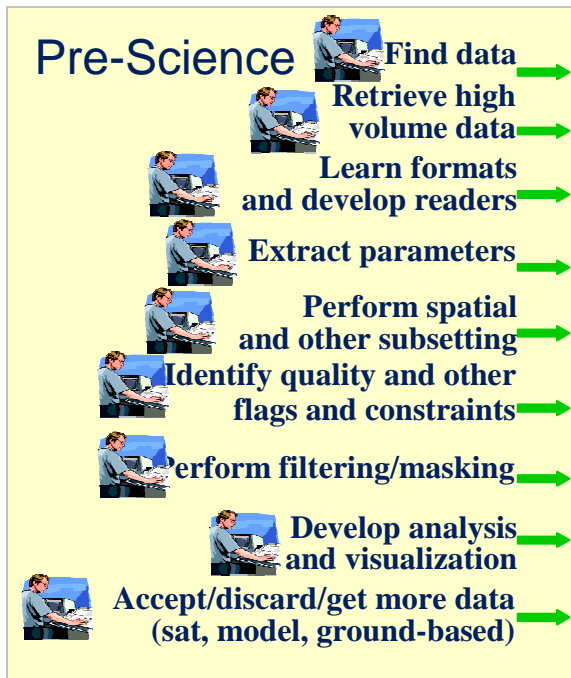


# GEOSS

## Web-based Services:

### The Old Way:

### The Services Way:



Services "Link-Rich" Environment Provides:  
*discovery, access, manipulation, visualization, and analysis.*

Scientists have **more time to do science.**  
*Decision makers rapid access to information*

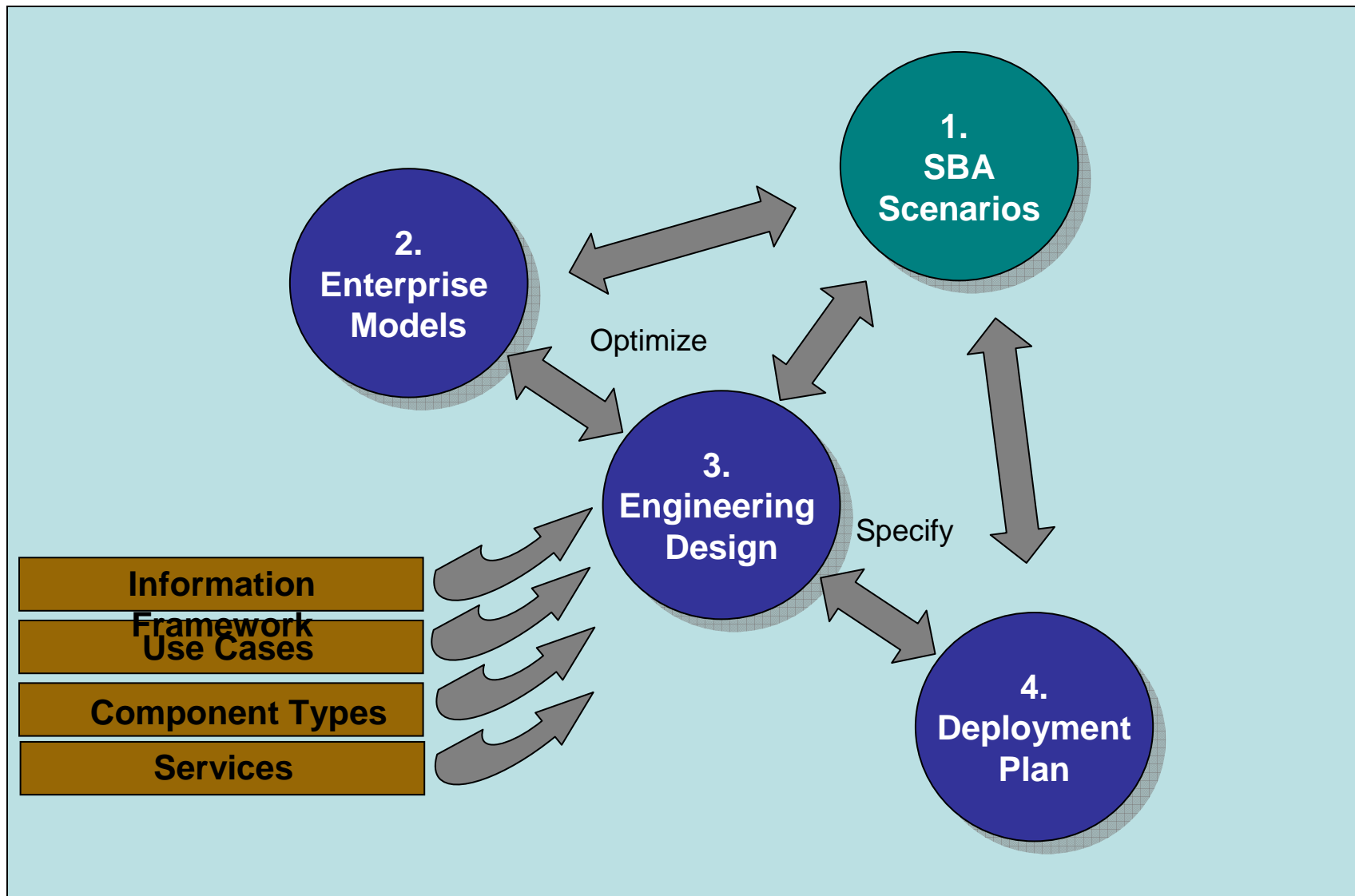


## SBA Scenarios in AIP-3

- Disaster Management
  - Flooding
  - Extreme Precipitation
- Water
  - Water Quality
  - Drought
- Health
  - Air Quality
  - Infectious diseases
- Biodiversity and Climate Change:
  - Ecosystem Evolution
  - Arctic SDI
- Energy



# AIP process to deploy Scenarios in Services





## GEOSS Common Infrastructure

Main GEO Web Site

### Registries

Components & Services

Standards and Interoperability

Best Practices Wiki

User Requirements

GEO Web Portals

GEOSS Clearinghouses

## Registered Community Resources

### Client Tier

Community Portals

Client Applications

### Business Process Tier

Community Catalogues

Mediation Servers

Alert Servers

Workflow Management

Processing Servers

Test Facility

### Access Tier

GEONETCast

Product Access Servers

Sensor Web Servers

Model Access Servers

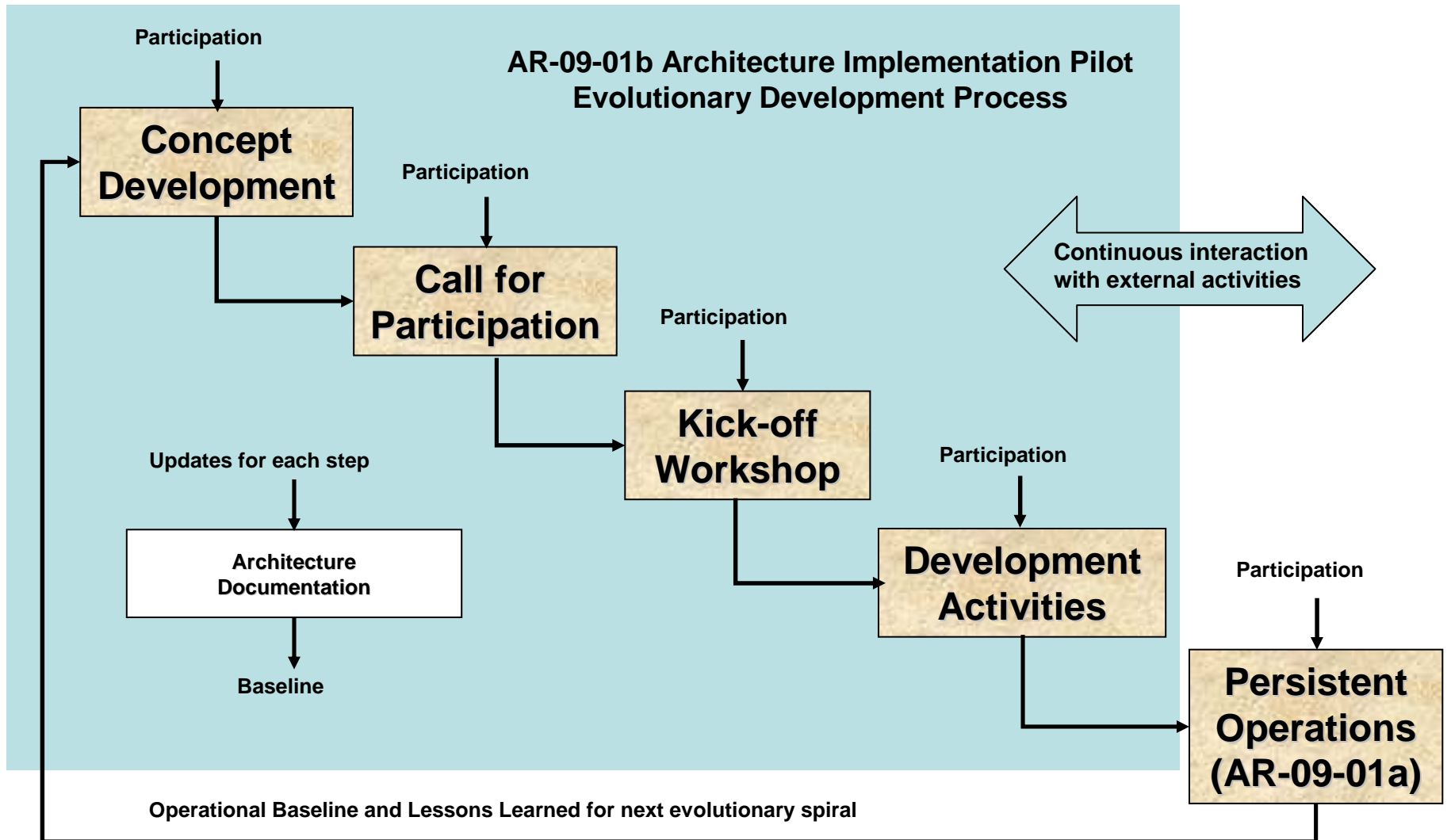


# Engineering Components and Interoperability Arrangements

Component	Example Interoperability Arrangements
Main GEO Web Site	http
GEO Web Portals	http, CSW, WMS, KML
GEOSS Registries	various
GEOSS Clearinghouse	CSW, ISO 23950
Community Portals	CSW, ISO23950, KML, WMS
Client Applications	CSW, ISO23950, WMS, WFS, WCS, SOS, SPS, WPS, CAP, KML, RSS, GeoRSS
Community Catalogues	CSW, ISO 23950
Mediation Servers	CSW, ISO 23950
Alert Servers	CAP, RSS, GeoRSS
Workflow Management	BPEL
Processing Servers	WPS
Test Facility	WMS, WFS, WCS, CSW
Product Access Servers	WMS, WFS, WCS, ftp, OpenDAP,
Sensor Web Servers	SOS, SPS, SAS
Model Access Servers	WMS, WCS, WFS, SOS
GEONETCast	DVB-S



# AIP Development Approach





## Architecture Implementation Pilot Conclusions

- Develop and pilot new process and infrastructure components for the GCI and the broader GEOSS architecture
  - Reports/videos: [www.ogcnetwork.net/AIP2ERs](http://www.ogcnetwork.net/AIP2ERs)
- Call for Participation in AIP-3
  - Develop and persist new capabilities in 2010
  - [www.earthobservations.org/geoss\\_call\\_aip.shtml](http://www.earthobservations.org/geoss_call_aip.shtml)
- GEO coordinations
  - Work Plan Symposium 17-19 May
  - Develop contributions for EO Summit